

TRAINING AND DOCTRINE COMMAND

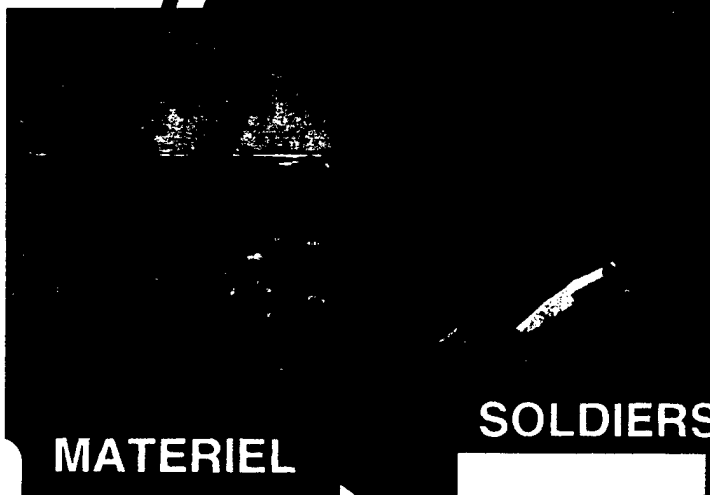
2ND QTR - FY96 UPDATE



DOCTRINE



TRAINING



MATERIEL

SOLDIERS



LEADER DEV



ORGANIZATIONS

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TRADOC... WHERE TOMORROW'S VICTORIES BEGIN

GENERAL WILLIAM W. HARTZOG
COMMANDER TRADOC

DISTRIBUTION STATEMENT A

Approved for public release
Distribution Unlimited

REPORT DOCUMENTATION PAGE

Form Approved

OMB No. 0704-0188

Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.

1. AGENCY USE ONLY (Leave blank)

2. REPORT DATE

1996

3. REPORT TYPE AND DATES COVERED

Quarterly. 2nd Quarter FY 96

4. TITLE AND SUBTITLE

Training & Doctrine Command 2nd Quarter FY96 Update

5. FUNDING NUMBERS

6. AUTHOR(S)

7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)

HQ, U.S. Army Training & Doctrine Command
ATTN: ATCS-I
Fort Monroe, VA 23651-5000

8. PERFORMING ORGANIZATION
REPORT NUMBER

9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)

10. SPONSORING/MONITORING
AGENCY REPORT NUMBER

11. SUPPLEMENTARY NOTES

12a. DISTRIBUTION/AVAILABILITY STATEMENT

Approved for public release; distribution is unlimited.

12b. DISTRIBUTION CODE

13. ABSTRACT (Maximum 200 words)

14. SUBJECT TERMS

15. NUMBER OF PAGES

16. PRICE CODE

17. SECURITY CLASSIFICATION
OF REPORT

UNCLASSIFIED

18. SECURITY CLASSIFICATION
OF THIS PAGE

UNCLASSIFIED

19. SECURITY CLASSIFICATION
OF ABSTRACT

n/a

20. LIMITATION OF ABSTRACT

n/a

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This is a pivotal time for the Army and the Training and Doctrine Command. Momentous changes in the strategic landscape, changes in our nation, and changes to our force structure present challenges and opportunities for all of us to accomplish the missions required of the U.S. Army. The business of TRADOC is to meet these challenges by identifying, developing, and fielding capabilities which are the right combinations of Doctrine, Training, Leader Development, Organizations, and Materiel to support our Soldiers. Following are some of the Army/TRADOC initiatives that will impact on the Army, our soldiers, and organizations in the not too distant future.

GENERAL WILLIAM W. HARTZOG
COMMANDER
U.S. ARMY TRAINING AND DOCTRINE COMMAND

DOCTRINE

The Army's doctrine lies at the heart of its professional competence. It is the authoritative guide to how Army forces fight wars and conduct operations other than war. Never static, always dynamic, the Army's doctrine is firmly rooted in the realities of current capabilities. At the same time, it reaches out with a measure of confidence to the future. Doctrine captures the lessons of past wars, reflects the nature of war and conflict in its own time, and anticipates the intellectual and technological developments that will bring victory now and in the future.

FM 100-5, Operations: The latest version of 100-5 was published on the Army's 218th birthday, June 14, 1993. As the Army's keystone manual, it focuses on warfighting, yet it addresses the full range of conditions within which the Army will operate. TRADOC has developed and fielded an education package containing teaching points on new concepts as they pertain to illustrated historical examples used in FM 100-5. The education package contains a CD-ROM disk, 35mm slide presentation, and video tape. TRADOC has distributed the education package down to division level with sufficient copies for each brigade-size unit. Contact or write Joint Visual Information Activity, Warehouse 3, Bay 3, Tobyhanna Army Depot, Tobyhanna, PA 18466-5102, DSN:795-7937, COMM: (717) 894-7937, FAX DSN: 795-6106 for a copy of the education package. FM 100-5 will be revised in the near future.

FM 100-7, Decisive Force:



The Army in Theater Operations: The Army's capstone manual for conducting operational level activities linking tactical level actions to theater objectives. This manual describes the requirement for the Army Service Component Commander (ASCC) to conduct the three strategic and operational level roles: establish joint, combined, interagency, non-governmental agencies, and private voluntary organization linkages; conduct support operations; and conduct operations. (Published May 95.)

FM 100-8, The Army in Multinational Operations: Will be the Army's capstone manual for conducting multinational operations. This manual addresses multinational command and leadership considerations. Discusses factors effecting planning, describes possible coalition/alliance command structures, and functional considerations for the commander at the operational and tactical level. Includes host nation support and a guide for coalition operations. (To be published 2nd QTR FY 96.)

FM 100-10, Combat Service Support: This is the capstone logistics manual that depicts the Army logistics organizations and describes how they support commanders at all echelons by integrating supply, transportation, maintenance, health services, personnel support, and field services. Provides the basis for subordinate logistics doctrine, materiel, training, and organizational development. (Published Jul 95.)

FM 100-12, Army Theater Missile Defense Operations: This manual will describe roles, responsibilities, requirements and functions for each of the operational elements of Theater Missile Defense (TMD). The manual is being developed in consonance with approved joint doctrine and will integrate insights derived from the 1995 TMD AWE, where applicable. The manual will address the threat, active defense, passive defense, attack operations and C4I. Emphasis will also be given to integration of Army TMD efforts throughout the theater. The Initial Draft of FM 100-12 underwent world-wide staffing 29 September - 30 November 1995. Copies of the Initial Draft were sent to over 130 Army, Joint and operational field elements. Coordinating Draft is expected to be out for

staffing o/a March 1996. (To be published 1st Qtr FY 97.)

FM 100-13, Battlefield Coordination

Element: This manual will provide the capstone doctrine for the Battlefield Coordination Detachment. It will describe the operational requirement for and purpose of the BCD, provide the organization, role and mission of the BCD and provide a doctrinal basis for the BCD Table of Organization and Equipment. The manual also provides broad doctrine for BCD operations, provides flexible tactics, techniques and procedures for conducting BCD functions and describes the interface between the BCD and AOC, LCC Corps staffs. There is also discussion of liaison requirements, communications requirements, automated data processing system interoperability and considerations for providing for providing a BCD within a contingency joint task force and to a Navy or Marine ACC. Coordinating Draft presently undergoing staffing which will be completed 30 January 1996. Final Draft for a CG, TRADOC DRAG is expected in the March/April 1996 timeframe. (To be published 4th Qtr FY 96).

FM 100-15, Corps Operations: The new FM 100-15 will bring corps doctrine in line with current Army doctrine. The central focus of the manual will be warfighting. The manual also will address force projection operations in war and operations other than war and the structure of the battlefield and battle command of the corps. Finally, it will delineate battlefield responsibilities in the joint environment, to include operations as a JTF/ARFOR headquarters. (Approved for publication Oct 95).

FM 100-16, Army Operational Support: This manual addresses operational level logistics and support functions - CONUS through theater level. It specifically addresses the operational commander's vision of support; keys to operational support; theater organization and structure, operational level CSS functions; operational level support function, force protection and rear operations. FM 100-16 also reflects the current Army focus on contingency operations and force projection. (Published May 95.)

FM 100-17, Mobilization, Deployment, Redeployment, and Demobilization: FM 100-17, Mobilization, Deployment, Redeployment, Demobilization. This manual is a guide for Army commanders and planners, involved with mobilization, deployment, redeployment, and demobilization (MDRD) operations. The manual describes the process used to MDRD Army elements through the use of required assets (forces/units, manpower/individuals, facilities, and logistics). The manual also introduces the reception, staging, onward movement, and integration (RSO&I) process. FM 100-17 serves as a link to other manuals currently under development: FM 100-17-1, Army Prepositioned Afloat; FM 100-17-2, Army Prepositioned Ashore; FM 100-17-3, Reception, Staging, Onward movement, and Integration; FM 100-17-4, Deployment; and FM 100-17-5, Redeployment. The final draft version is under final review prior to being forwarded to the editors. The manual will be published 2 Qtr FY 96.

FM 100-17-1, Army Pre-positioned Afloat: In March 1993, it was determined that the only way the military was to increase its deployability was to expand its investment in three things known as the Army Strategic Mobility Program triad; sealift, airlift, and afloat prepositioning. This manual establishes the doctrinal framework for the one portion of that triad, Army War Reserve-3 (APA). APA is the expanded reserve of equipment for an armor brigade, theater-opening CS/CSS units, port-opening capabilities, and sustainment stocks aboard forward deployed pre-positioned afloat ships. This manual describes APA operations to include missions, capabilities, command relationships, communications, and security. It discusses the organization, responsibilities, and command relationships ranging from the National Command Authorities, Joint Chiefs of Staff, Combatant Commander (CINC), to the Brigade Commander performing the APA mission. (To be published 2nd QTR FY 96.)

FM 100-18, Space Support To Army

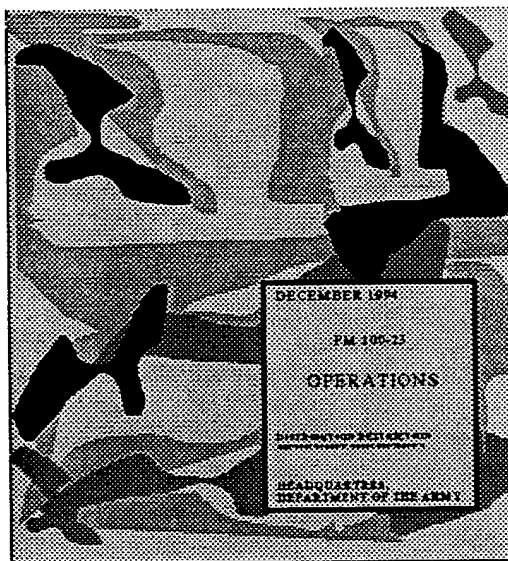
Operations: Will be the Army's capstone manual on how to use space system capabilities to enhance mission accomplishment across the full range of military operations to include operations other than war. It emphasizes enhancements offered by space system in communications;

reconnaissance, intelligence, surveillance, and target acquisition (RISTA); weather, terrain, and environmental monitoring, position and navigation; and missile warning. This manual provides a foundation for leader development, training, and space-related modernization initiatives that support the Force XXI Army's missions and provides soldiers with a decisive advantage worldwide. It is relevant from the highest levels of command to the soldier in the foxhole. (Published Jul 95.)

FM 100-19, Domestic Support Operations:

Describes the concept, interface, and process of providing Army assistance to U.S. civil authorities. It serves as a reference for service and professional military education and includes mandated and legislated requirements. It includes considerations and principles for command and staff planning and execution. FM 100-19 incorporates lessons learned from numerous operations and recognizes the requirements dictated by the National Military Strategy. Coordination with DA staff, TRADOC, MACOMs, CINCs, joint staff, and federal, state, and local governmental agencies is being conducted to ensure harmonized actions. Finally, this manual emphasizes the linkages of interagency operations and missions. (Published Jul 93.)

FM 100-23, Peace Operations:



Provides guidance to commanders for conduction the full range of missions in support

of international peacekeeping and peace enforcement efforts. This manual addresses the special requirements of these operations, to include planning, force tailoring, command, control, coordination, liaison, logistics and intelligence. It also reviews the unique operational environment of peace operations, including United Nations and non-United Nations' operations, as well as the requirements for operations in the interagency arena and with multinational forces and non-governmental organizations. It applies the principles of operations other than war and tenets of Army operations to peace operations and examines the variables of consent, use of force, and impartiality. (Published 94.)

FM 71-100, Division Operations: This manual addresses tactical operations of the division in war and operations other than war. Focus is on division deployments and war fighting. It will apply new concepts addresses in FM 100-5 to division operations. The new Fm 71-100 will be integrated both vertically and horizontally with recently written field manuals such as FM 101-5, Staff Organization and Operations; and TTP manuals FM 71-100-1, Armor and Mechanized Division Operations, FM 71-100-2, Infantry Division Operations, FM 71-3, The Armored and Mechanized Brigade and FM 7-30, the Infantry Brigade. (Approved for publication Oct 95.)

FM 71-3, Armored and Mechanized Infantry Brigade: The U.S. Army Armor Center is proponent for this manual. They are writing it in concert with the U.S. Army Infantry Center and School. The latest version of FM 71-3 incorporates new Army doctrine reflected in the 1993 edition of FM 100-5. The manual will include doctrine and tactics, techniques and procedures for armored and mechanized brigades in conducting operations across the entire range of military operations. (Approved for publication Sep 95.)

FM 71-2, Tank and Mechanized Infantry Battalion Task Force: The U.S. Army Infantry School is lead for this manual; co-proponent is U.S. Army Armor Center. The revised FM 71-2 will incorporate new Army doctrine reflected in the 1993 version of FM 100-5. The focus of this manual will be warfighting with considerations for operations other than war. It will provide TTP for employment of force as it

exists and will provide appendixes for digitization of the tank and mechanized infantry battalion task force. (To be published 4th QTR FY 97.)

FM 71-1, Tank and Mechanized Company Team: The U.S. Army Armor Center is lead for this manual; co-proponent is the U.S. Army Infantry School. Revised FM 71-1 will provide tactics, techniques and procedures for the M1A2 and Bradley company/team. It will refine mission profiles and provide TTP for heavy/light link-up and operations with task force scout platoons. (To be published 3rdQTR FY 97.)

TRADOC Pam 11-9, Blueprint of the Battlefield (BOB): The BOB is a comprehensive hierarchical listing of Army battlefield functions and their definitions. It collectively includes their blueprints, one for each level of war, i.e., strategic, operational and tactical. It also serves as a common reference system for field commanders, combat developers, analysts, trainers, and planners for analyzing and integrating operations. It assists staff and field organizations in relating Army needs to Army missions. This pamphlet also provides a basis for describing Army requirements, capabilities, and combat activities at the three levels of war. Currently the BOB is under revision. It will be ready for Army wide staffing as a Field Manual in January 1996, and subsequent publication 2nd QTR FY 96. (POC Army Doctrine: COL Baldwin, DSN 680-3080 PROFS-BALDWINR or e-mail BALDWINR@monroe.emh10.army.mil)

JOINT DOCTRINE

JP 3-0, Doctrine for Joint Operations: TRADOC has written 12 joint publications that the joint staff has approved and published. The most significant of those is JP 3-0. It is the joint keystone operations equivalent of FM 100-5 and affects most other important pubs in the joint system. (Published Sep 1993).

JP 3-07, Joint Doctrine for Military Operations Other Than War: Expands the discussions in JP 3-0 of the principles and considerations associated with joint operations below the level of large scale, sustained combat operations. Names many of the operations and provides examples of the

principles of OOTW in action. (Published and awaiting distribution)

JP 3-07.3 JTTP for Peace Operations: Expands work done in the previously approved JP 3-07.3, JTTP for Peacekeeping Operation, to include Peace Enforcement and Support to Diplomacy. Publication of the Program Directive (PD) from J7, Joint Chiefs of Staff tasking the US Army as lead agent is expected by October 1995. (To be published 2nd Qtr FY97)

JP 3-07.6 JTTP for Foreign Humanitarian Assistance: Provides procedures to be used by joint forces in conducting humanitarian assistance in overseas foreign areas. Describes interfaces between the joint task force with non-governmental organizations (NGOs) and private voluntary organizations (PVOs) likely to be operating in such areas. (To be published 1st Qtr FY 97)

JP 3-07.7 JTTP for Domestic Support Operations: Provides procedures to be used by joint forces in conducting support within the continental US, Alaska and Hawaii, and territories and possessions. Applies to major categories of Military Support to Civil Authorities (MSCA) and Military Support to Law Enforcement Agencies (MSLEA). (To be published 2nd Qtr FY 97)

JP 3-09, Doctrine for Joint Fire Support: Clarifies relationships and responsibilities for those fires that assist land and amphibious forces to maneuver and control territory, populations, and key waters. Included are discussions on issues such as FSCL, Joint Targeting Coordination Board (JTCB), and relationships between air, land, and sea components. JP 3-09 supports a series of pubs such as JP 3-09.1, Joint Laser Designation Procedures, JP 3-09.2, JTTP for Radar Beacon Operations and JP 3-09.3, JTTP for Joint CAS. (3d Draft TBP in Dec 95).

JP 3-18, Joint Doctrine for Forcible Entry Operations: Provides guidance concerning joint forcible entry operations. This publication addresses forcible entry principles concerning C2, planning, execution, and support, as well as the interface between airborne, special operations forces, and naval expeditionary forces (amphibious forces). Proposed final pub

was distributed May 95. (To be published 2d QTR FY96).

JP 3-18.1, Joint Airborne and Air Assault Operations: Provides guidance on employment of airborne and air assault forces. This publication integrates existing Service doctrine into a single source publication that addresses principles of C2, planning, execution, and support requirements involving airborne and air assault operations. 2nd Draft was distributed May 95. (To be published 2d QTR FY 96).

JP 3-56, Command and Control Doctrine for Joint Operations: This pub sets forth principles, doctrine, and military guidance for establishing command and control in joint operations. Included are discussions on the joint chain of command, information and C2 relationships, command relationships, organizing the joint force, service component contributions to the joint force, and joint boards, coordinators, and agencies. (3d Draft circulated for comment; TBP 3d QTR 96)

JP 5-00.1, Joint Tactics, Techniques, and Procedures for Campaign Planning: Provides guidelines for the planning of theater and subordinate campaigns. Expands on guidance currently found in JP 3-0, Joint Operations, JP 5-0, Planning for Joint Operations, and JP 3-56, Command and Control of Joint Operations. Discusses considerations for the application of operational art, elements of design and the integration of strategical and operational functions. JP 5-00.1 (2nd Draft) was submitted for worldwide review in May 95. (To be published 1st QTR FY 96). (POC JOINT DOCTRINE COL Smith, DSN: 680-3153/PROFS SMITHM or e-mail SMITHM@monroe.emh10.army.mil)

CINC SUPPORT PROGRAM

The CINC Support Program represents a major initiative by which TRADOC provides support to warfighting CINCs on behalf of the Chief of Staff of the Army. The concept of the program is to assist CINCs in accomplishing their missions and objectives through a program of focused and responsive support in the areas of doctrine, training, leader development, organizations, material, and soldiers (DTLOMS). The cornerstone of this program is

annual visits to supported CINCs. This FY, trips are scheduled to CENTCOM, SOUTHCOM, EUCOM, ACOM, PACOM and USFK. Significant issue trends identified include: joint task force organization, training, doctrine, and systems interoperability; corps capability to function as ARFOR and JTF headquarters; need for OOTW doctrine (primarily TTP/TSP); and recognition that CINCs operate in multinational environments. (POC CINC SPT LTC Quinn, DSN 680-2888 PROFS QUINNMM e-mail QUINNMM@monroe.emh10.army.mil)

FUTURE DOCTRINE

TRADOC PAM 525-5 Force XXI Operations: The most recent version of TRADOC Pam 525-5, Force XXI Operations, was published on 1 August 1994. The concepts and ideas contained in it are the intellectual basis for the more definitive follow-on doctrine of early 21st century Army operations. It is a living document; a document of ideas derived from leading thinkers in the military and civilian communities. The central theme is a 21st century Army based on quality soldiers and leaders in versatile mission-tailored units, enhanced by the power of information, superior technology and effective battle command. An update of TRADOC Pam 525-5 is currently under consideration for possible publication as early as the summer of FY97. The update will focus on expanding the discussion of the National Security Strategy, National Military Strategy, Principles of War, the Combat Power Model and a further analysis of the implications of these concepts and ideas. Information gathered during exercises, symposiums, conferences, critiques and operational experiences, will be the primary sources used to update this pamphlet.

FM 100-6 Information Operations: As the Army's new capstone publication for Information Operations (IO), this manual supports the National Military Strategy (NMS) and explains the fundamentals of information operations for the Army. Information Operations doctrine reflects, and goes beyond, the joint military strategy of Command and Control Warfare (C2W), which implements Department of Defense (DOD) Information Warfare policy. Information Operations identifies information as a major influence on operations at the tactical, operational, and strategic levels. It

enables commanders to successfully integrate information, information systems, and their effects across the full range of military operations. Such integration enables and enhances the elements of combat power. Synergy is created which contributes to increased lethality, survivability and tempo in combat as well as highly credible and capable forces in operations other than war. Moreover, IO doctrine addresses the framework that will enable the commander to use all available information, protect the ability to sense, process, integrate, decide, act on, and manage that information, as well as, exploit and deny the adversary's ability to do the same. This manual facilitates the transition of the total U.S. Army to the Information Age. (POC Future Doctrine: COL Starry, DSN: 680-4126/PROFS-STARRYM or e-mail STAR-RYM@monroe.emh10.army.mil)

INTERNATIONAL ARMY PROGRAMS

In support of the National Military Strategy and to enhance the U.S. capability for multinational force compatibility, TRADOC remains extensively involved in international activities with allied and friendly armies. Involvement includes bilateral staff talks and conferences with 10 armies, participation in approximately 40 multinational working parties, and several Subject Matter Exchanges (SMEE) with the armies of Japan, Latin America, and European nations. During the 2nd quarter, FY96, TRADOC will conduct Staff Talks with Japan. Numerous SMEEs are scheduled, as well as a simulations exercise with the Ukraine in support of EUCOM's mil-to-mil contact program. Visits by foreign military dignitaries will be hosted. (POC International Army Programs: COL Whittenberg, DSN 680-2741, PROFS WHITTENS or e-mail WHITTENS@monroe.emh1.army.mil)

INTELLIGENCE

TRADOC Pam 350-12 thru 17, Heavy/Light Opposing Force (OPFOR) Handbooks: are undergoing conversion for publication as the FM 100-60 series. TRADOC fielded the 350 series pamphlets for interim implementation until publication of the FMs. The FMs are:

FM 100-60, Heavy Opposing Force Organization Guide: This manual breaks from past traditions of focusing on one country and provides a flexible capabilities-based heavy opposing force model that represents various countries. It is not a fixed order of battle, but it provides the building blocks to derive a heavy force order of battle. It is fully adaptive to the training needs of the force projection Army. (To be published 2QTR FY96.)

FM 100-61, Heavy Opposing Force Operational Art: This manual provides the Army with an operational overview of the heavy capabilities-based opposing force. It contains military thought, strategic operations, offensive and defensive operations, troop control, reconnaissance, artillery, NBC and Smoke, air defense, engineer, logistics, airborne and special purpose forces. (To be published 4QTR FY96.)

FM 100-62, Heavy Opposing Force Tactics: This manual provides the Army with a tactical overview of the heavy capabilities-based opposing force. It contains combat formations, troop control, march, reconnaissance, offensive and defensive tactics, fire support (artillery, antitank, air and air defense) NBC and Smoke, engineer, logistics, and radio electronic combat. (To be published 3QTR FY96.)

FM 100-63, Light Opposing Force Organization Guide: This manual breaks from past traditions of focusing on one country and provides a flexible capabilities-based light opposing force that represents various countries. It is not a fixed order of battle, but it provides the building blocks to derive a light forces order of battle. It is fully adaptive to the training needs of the force projection Army. (To be published 2QTR FY96)

FM 100-64, Light Opposing Force Operations and Tactics: This manual provides the Army with an operational overview and the tactics of the light capabilities based opposing force. It contains military thought, organization for combat, combat operations, airborne and air assault operations, naval operations and amphibious landings, partisan operations, logistics, engineer, and rear area operations. (To be published 3QTR FY96.)

FM 100-65, Opposing Force Equipment Guide: This manual provides a description and the capabilities of various types of military and related equipment available on the world arms market. (To be published 1QTR FY97.)

FM 100-66, Peacetime Operations - Opposing Forces: This manual provides a broad range of conventional and unconventional military threats the Army may face in a peacetime operation environment. It will allow the user to select a specific level of opposing force or tactical environment to meet the training needs of the force. It will not address disaster relief operations, where an opposing force is not present. The manual will describe non-mechanized small unit operations (battalions and below) and continue to the lowest level of the military spectrum: guerrilla forces. (To be published 2QTR FY97.) (POC - Opposing Forces Directorate, LTC Jeff Dunham, DSN 680-5419, PROFS DUNHAMJ or email DUNHAMJ@monroe.emh10.army.mil) (PO-C - Threat Support Directorate, Mr. Nick Comer, DSN 552-7937, PROFS COMERN LEA1 or e-mail COMERN@leav.emh1.army.mil)

TRAINING



Our challenge is to maintain the essence of our education and training system, the Army University, not the pieces. This means a quality school system, but not necessarily at the current locations. Our training strategy must utilize the best combination of live, virtual and constructive simulations and simulators. This

strategy must unite the many ongoing efforts into a clear, coherent vision to produce trained and ready units in the environment of the next century. Some of our efforts in that direction follow.

ARMY TRAINING XXI (AT XXI):

Force of Tomorrow: The U.S. Army designs the 21st Century (Force XXI) beginning now to achieve related fielding and support decisions by the year 2000 in order to fully field the total Army force that is capable of meeting our Nation's 21st Century challenges. Force XXI will be built in a series of iterations guided by decisions made at successive quarterly BoD/Force XXI AAR meetings. The campaign will include three axes: Joint Venture (main axis); TDA/Institutional Army (supporting axis); and the Army Digitization Office (supporting axis). Using **Joint Venture (JV)**, the Army is executing a series of Advanced Warfighting Elements (AWE) and Advanced Warfighting Demonstrations (AWD) to define the force of tomorrow: Force XXI. The strategic objective is to transform the force from an Industrial Age Army to a knowledge and capabilities based, power projection Army (Force XXI), capable of land force dominance across the continuum of 21st Century military operation, by redesigning the fighting forces and leveraging information technology to better support combat and sustainment base functions. As the Army creates Force XXI, we must concurrently develop the means and methods to train and sustain the force. TRADOC developed the AT XXI concept to ensure that training is included in every phase of Force XXI development. AT XXI integrates all the numerous on-going initiatives and future developmental efforts to produce a coherent, integrated training system and strategy for Force XXI. In June 1995, the Army Deputy Chief of Staff for Operations (DCSOPS) formally acknowledged AT XXI as the training component of the JV axis of the Army Campaign Plan to develop Force XXI. TRADOC's AT XXI concept incorporates three Strategic Campaign Plans in the development of the JV training component: **Warfighter XXI (WF XXI)**, **Warrior XXI (W XXI)** and **Warfighter Network (WARNET)**.

The **WF XXI** Campaign Plan (CP) is the main attack for AT XXI and focuses on the unit training pillar. The **WF XXI** CP provides a

strategic vision and an integrated plan for how the future Army will train battle staff and collective tasks.

The W XXI CP focuses on the development of the institutional and self development pillars of training. It also provides a strategic vision and an integrated plan for the development of the Total Army School System (TASS) to meet the institutional and self development training needs of Force XXI.

WARNET XXI provides the linkage of training acquisition, new equipment training, and digitization of training support products. WARNET XXI integrates training support needs into system/hardware materiel requirements to ensure a complete training subsystem is fielded. WARNET XXI develops and provides new equipment training packages for proponent use in developing institutional training programs and exportable training products for units; and ensures that contractor developed training products are digitized in accordance with Army standards and integrated into the force.

The third semi-annual WF XXI conference will be conducted as an integral part of the Army Training XXI Conference 26 Feb - 1 Mar 96 at Hampton, VA. The purpose of this conference is to focus and integrate our development of systems for executing training for tomorrow's Army. All three axis (WF XXI, W XXI, and WARNET XXI) of AT XXI will participate. (POC - COL Marlin, DSN 552-4498/3919/e-mail Marlind@leav.emh1.army.mil)

WARFIGHTER XXI Programs and Initiatives:

WF XXI COMPONENTS: The five components of the WF XXI campaign plan are: the Standard Army Training System (SATS); Training Support Packages (TSP); Training Aids Devices, Simulations, and Simulators (TADSS); the Standard Army After Action Review System (STAARS); and the Army Training Digital Library (ATDL). SATS (under development by the Army Training Support Center) provides an automated training management system designed to enhance the planning, resourcing, execution and assessment of battle-focused training for the unit and institutional commander. Training Support Packages (TSPs) are a task based information

package that provide structured situational training scenarios for live, virtual, and/or constructive training environments, and assist the commander in conducting and assessing training. TSPs (brigade and battalion TSPs are under development by the Force XXI Training Program. TADSS provides integrated, effective tools for the unit and institutional commander to efficiently conduct training. The STAARS provides a standardized, automated storage and distribution system giving the unit and institutional commander a training assessment and resource tool and the Army a doctrinal based information collection system. The ATDL (under development by the Army Training Support Center) stores the data and provides unit and institutional commanders access to data from many information sources necessary to plan, resource, execute, and assess training. (POC - COL Marlin, DSN 552-4498/3919/e-mail Marlind@leav.emh1.army.mil)

Standard Army Training System (SATS):

SATS is a computer based software system that automates training management doctrine found in Field Manual (FM) 25-100, Training the Force, FM 25-101, Battle Focused Training, and FM 100-5, Operations. It provides the opportunity to incorporate training plans and products, readiness reporting tools, calendars (three-dimensional), schedules, all unit activities and related data bases at all echelons, and computes associated resources.

SATS accesses and feeds all Army Training Digital Library (ATDL) components as well as other Warfighter XXI (WF XXI) components. SATS version 4.0 currently under development, will serve as the keystone Army effort to bring training management into the 21st century. This system combines training doctrine with automation technologies to help trainers develop and manage their training programs. Future SATS (version 4.x) will provide enhancements to better support the needs of both active and reserve component units with a wide array of training management features. Using Microsoft Window, SATS 4.x will be Local Area Network (LAN) and Wide Area Network (WAN) capable, and interfaces with other WF XXI components. (POC - Mr. Lengyel DSN 552-7840 e-mail Lengyelr@leav.emh1.army.mil)

Training Support Packages (TSP): TSP is a structured situational training template offering

live virtual, or constructive battle staff and collective training events and assists the commander in executing and assessing training. TSPs (WF) provide task based products (orders, overlays, execution matrices, etc) to plan, prepare and execute battle command/staff (individual through collective) and unit (collective) training.

The Force XXI Training Program (FXXI TP) at Fort Knox is the lead effort for WFXI TSP development FXXITP is focused on the mounted brigade and represents a prototype strategy for transitioning the Army from the way it trains today to how it will fight in the future. The FXXITP describes which tasks are to be trained to a given standard using prescribed live, virtual, and constructive simulations. It has pioneered development of structured individual and small group staff training in the form of tables, and exercises based on detailed tasks, conditions, and standards (TCS).

Currently the Combined Arms Center (CAC) is in the early developmental stages of a structured division level staff training program called the Simulations based Division Army Trainer (SIMDART). SIMDART will provide the division commander a staff training vehicle for individual, staff group, and battle staff collective training. (POC - Major Lopez, DSN 552-3919/ e-mail Lopez1@leav.emh1.army.mil)

Training Aids, Devices, Simulations, and Simulators (TADSS): Current efforts are focused on completing the DCSOPS approved nonsystem TADSS priorities through the FY 98-03 Warfighting Lens Analysis (WFLA) process. The DCSOPS approved priorities support building the synthetic environment capabilities required to support Force XXI training needs. Simultaneous efforts are ongoing to maintain current Training Mission Area (TMA) funding thresholds for FY 97-01 to ensure transition to required Force XXI training end state capabilities. Continue to scrub and revalidate system TADSS requirements with DCSOPS Force Development and DCSOPS Training. Primary thrust is to gain visibility of system TADSS funding within each weapon system's MDEP. Visibility of system TADSS funding is imperative to integrating and managing system and nonsystem TADSS requirements across the Battlefield Operating

Systems. (WF XXI POC - Mr. Monaco DSN 552-7827/e-mail monacoa@leav-emh1.army.mil
WARNET XXI POC - Mr. Whitney DSN 927-3841/e-mail whitneyr@eustis-emh20.army.mil)

Deployable Range Package (DRP): This program is designed to provide deployed U.S. Forces with live fire and force on force training capabilities in the theater of operations. The training concept is to develop a light and heavy DRP to support brigade size elements. These will be configured to meet the commander's training needs and will include MILES, target lifting devices, targets and controlling mechanisms. The DRP is designed to support individual through platoon level training including weapons sustainment and live fire maneuver training. The heavy DRP will support heavy force gunnery through gunnery table XII. The light DRP will support all small arms qualification and sustainment training. The original concept was tested successfully in Haiti and to support exercise Intrinsic Action in Southwest Asia. The deployable package concept will be expanded to include training support for force-on-force company-level training and platoon/company live-fire. The training support concept also includes individual and leader training using a mixture of live/constructive/initial TADSS and video teletraining. Plans are underway to support operations in Bosnia. (POC - Mr. Goodman, DSN 927-2320/ e-mail Goodmanw@eustis-emh20.army.mil)

Training Instrumentation Systems: Instrumented training, typically confined to the Maneuver Combat Training Centers (CTC), is now beginning to expand beyond that environment. Training instrumentation is used to collect, archive, process, and feedback training event data to provide accurate, timely and unbiased after action reviews to the training unit. The primary training audience is brigade and battalion commanders and staffs. Properly applied, training instrumentation can provide commanders clear and accurate information on unit abilities to conduct assigned missions. Expanding on its beginnings in the early 1980s at the National Training Center and now also found at the Joint Readiness Training Center and the Combat Maneuver Training Center, training instrumentation is undergoing evolutionary changes that will provide this training capability at home

station and in transportable packages that deployed units can use to sustain unit skills, maintain tactical proficiency, and conduct mission rehearsals. Instrumented training, as a prime component of the live simulations environment, is being integrated with the constructive and virtual simulation environments to expand training capabilities and efficiencies for commanders and staffs in combined live and synthetic theater of war exercises.

Instrumented support to the training and operational test communities in the development of Force XXI has started the conduct of Army warfighting exercises at the CTC. This support will grow as the test and evaluation community is included in the development of new training instrumentation systems. Concurrently, joint service instrumented training has become a reality with the linking of the National Training Center instrumentation with the Air Force's Air Warrior Measurement Debriefing system. Work continues on the expansion of this joint training success with conduct of the Navy/Air Force Joint Tactical Combat Training System program's study on Interoperability with Army and Marine Corps ground instrumentation systems. (POC - Mr. Letts, DSN 927-4714/ e-mail Letts@eustis-emh20.army.mil)

Multiple Integrated Laser Engagement System (MILES) 2000: The proponent for this acquisition program managed by the Simulation, Training, and Instrumentation Command is the Combat Training Support Directorate (CTSD) of the Army Training Support Center (ATSC). The purpose of the program is to replace the ground direct fire basic MILES systems currently in the field at homestation. MILES devices shoot eye-safe "laser bullets" to simulate actual weapons systems and range from the M-16 rifle up to and including the M1A2 tank.

- MILES 2000 devices will incorporate a number of enhanced capabilities over those found in the current system, among them.
- Each player, to include manworn infantry systems, will transmit Player Identification (PID).
- Vehicle systems will be subject to multiple levels of kills, (i.e. catastrophic, firepower, mobility, and communications).
- Combat vehicles will be subject to aspect-angle dependent kills.

- All players will have the capability to store 500 time-tagged events for downloading and after action review purposes.

- All systems will incorporate improved manufacturing and power management techniques which promise to reduce support costs. (POC - Mr. Lembke DSN 927-4713/ e-mail Lemke@eustis-emh20.army.mil)

Simulated Area Weapons Effects/ Multiple Integrated Laser Engagement System II (SAWE/MILES II): The proponent for this acquisition program managed by the Simulation, Training, and Instrumentation Command (STRICOM) is the Combat Training Support Directorate (CTSD) of the Army Training Support Center (ATSC). The purpose of the program is to integrate the direct fire MILES force-on-force training capability with area weapon effects: indirect fire (artillery mortars, and naval gunfire), mines, and chemical and nuclear munitions. SAWE/MILES II devices will incorporate a number of enhanced capabilities over those found in the current MILES system, among them:

- SAWE/MILES II incorporates Global Positioning System (GPS) to provide individual player (Vehicle Detection Devices and Manworn Detection Devices) determined position which is used to assess area weapons effects.
- Vehicle Detection Devices and Manworn Detection Devices provide connectivity to Combat Training Center-Instrumentation System (CTS-IS).
- Each vehicle transmits Player Identification (PID).
- Each vehicle console has a built in test capability and provides the crew synthesized voice cues.
- Vehicle systems will be subject to multiple levels of kills, (i.e. catastrophic, firepower, mobility, and communications).
- Combat vehicles will be subject to aspect-angle dependent kills.
- Vehicles will have audiovisual cues to simulate engagement by area weapons.
- Programmable time of flight for TOW missiles.
- Manworn Detection Device has a M40 protective mask compatible interface to enforce chemical assessments based upon proper mask utilization.

- All players will have the capability to store 500 time-tagged events for future downloading and after action review purposes.
- Mine Effects Simulators simulate antitank and antipersonnel mines.
- A Chemical Agent Alarm Simulator is provided.
- Mission Control Station provides a central user and fire mission interface, enabling both red and blue force play. (POC - Mr. Adkins DSN 927-4631/ e-mail Adkinsd@eustis-emh20.army.mil)

Standard Army After Action Review System

(STAARS): STAARS standardizes all current and future After Action Review systems to provide trainers, training developers, combat developers with Doctrine, Training, Leader Development, Organizational Design, Material, and Soldier Systems (DTLOMS) base information and feedback on performance of systems, students, and units. It provides the training resource manager with usage rates and operating costs of all training resources. In the future, STAARS supports the data collection requirements of the force and material development communities. The data from STAARS must be standardized, irrespective of the environment in which the exercise was conducted (live, virtual, constructive), and provide assessment of the unit's training proficiency, unit readiness, lessons learned, and resource management. future STAARS uses DSI as the Army's information highway to feed information to ATDL. (POC - Major Carpenter, DSN 552-3919/ e-mail Carpentm@leav.emh1.army.mil)

Army Training Digital Library (ATDL):

ATDL is the information foundation and the single, common component between Warfighter XXI, Warrior XXI and Warnet XXI training campaign plans in support of the Army Training XXI training strategy. When implemented, the ATDL will provide a globally accessible digital repository of training knowledge sets and interactive applications to support training of individuals and units.

ATSC is developing ATDL to provide normal library functions, maintain a library information catalog, produce statistical and management information, provide a help desk and transmission of requested training information. Objectives include gathering and consolidating

Army training information, and to implement smart training technology that will fully support the needs of training developers, trainers, soldiers, and units. These objectives will be met through a broad range of initiatives that include communications, data digitization and collection, establishing file protocols, implementing a distributed architecture of standardized and integrated information. Development of the ATDL and its integration with other Army information systems will be a continuing process. The ATDL system is being designed with enough flexibility so that the Army can make use of future technologies.

The ATDL Functional Description (FD), which addresses Warfighter XXI campaign plan (unit training) requirements, has been completed. We are currently working on an updated FD to include requirements of the Warrior XXI campaign plan. It is projected to be completed by 30 Dec 95. The ATDL action plan, laying out developmental milestones, is also being updated and will be included within the FD. A Mission Needs Statement (MNS) has been completed and submitted to HQ TRADOC for coordination. Coordination of the MNS is pending briefing to the HQ TRADOC Information Management Support Council (IMSC).

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A Mission Needs Statement and Functional Description have been completed. An action plan laying out developmental milestones has been completed in draft and is being staffed for comment. The ATDL development, and its integration with other Army information systems will be a continuing process. The system is being designed with enough flexibility so that the Army can make use of future technologies. (POC - Mr. Ham, DSN 552-7845 e-mail hamj@leav.emh1.army.mil))

Operations Group Delta - JTF Training: Battle Command Training Program (BCTP), Operations Group D is tasked with the mission to prepare Army organizations for joint command and control roles. They work closely with Army service component commanders and Warfighting CINCs to bring the rigor of BCTP to joint exercises, in which an Army organization is acting as a JTF or ARFOR HQs. The primary training audience is the corps in a joint role, but divisions and ad hoc joint organizations have been supported. The team is capable of providing home station seminars, support to exercises, and support to operational missions. (POC - LTC Weith, DSN 680-5747/e-mail weithg@dcst.monroe.army.mil)

WARRIOR XXI Programs and Initiatives:

Warrior XXI: WARRIOR XXI defines those future activities in the TDA Army and the institutional axis of Force XXI required to train the total Army of the future. WARRIOR XXI has eight major initiatives. Each of these lanes represent a major initiative which will dramatically change the way we organize and how we manage and train soldiers of the future. These initiatives are: Training Development, Diagnostics, Centers and Satellites, Total Army School System (TASS), Distance Learning, Classroom XXI, Automation/ Digitization, and Advanced Training Strategies including such concepts as "On Demand Training." These initiatives will change the training paradigm for both institutional and self-development training. When combined with WARFIGHTER the main effort, and WARNET XXI, WARRIOR XXI will provide the architectural foundation for the future Army institutional schoolhouses. (POC -

Mr. Buckley, DSN 680-5535/e-mail buckleyj@dcst.monroe.army.mil)

Total Army Training System (TATS) Course: Development and implementation of TATS courses are objectives of the Total Army School System (TASS). Toward this end, one of the key goals of the TASS is to transition from Reserve Component Courseware (RC3)/Active Component courses into TATS courses. The value of TATS courses lie in the Army's ability to ensure that soldiers in all components are trained to the same performance standard. Specifically, a TATS course is defined as a course designed to train the same Military Occupational Specialty/Area of Concentration (MOS/AOC) skill level, Additional Skill Identifier (ASI), Language Identifier Code, Skill Qualification Identifier, or Skill Identifier within the Total Army. The TATS course ensures standardization by training, testing, and evaluating all course critical tasks to the same task performance standard although training may be conducted at different sites and may involve use of different media/methods for various phases/modules/lessons. Unlike RC3, all course critical tasks taught to the AC are taught to the RC community. TATS Implementation Guidelines and Policy will be provided to proponent schools in September 1995. Implementation guidelines include resource implications and key Systems Approach to Training considerations associated with TATS courses. The overall goal is for proponent schools to completely transition from RC3/AC courses to TATS courses over the next 5 years. (POC - Ms. Vallery L. Doe, DSN 680-5587/e-mail doev@dcst.monroe.army.mil)

TRADOC Regulation 350-70: The TRADOC Regulation 350-70, Training Development Management, Processes, and Products, is a consolidation of all training development (TD) policy (13 TRADOC regulations, four TRADOC pamphlets, several TRADOC memorandums, and TD policy extraction from two other training regulations) into one regulation. The regulation covers the TD process (the Systems Approach to Training (SAT)); training/TD management; Total Army School System (TASS); QA/evaluation including accreditation; instructor certification; training product development (individual, collective, self development); and HQ TRADOC, DCST vision of TD initiatives that support Force XXI,

including WARRIOR, WARFIGHTER, and WARNET XXI Training Support Package (TSP) description/components; CTC interface; Classroom XXI; distance learning; automation; etc. The result of this consolidation is--

- A reduced number of TRADOC regulations
- Elimination of duplicative, conflicting, and outdated policy and processes
- Streamlined policy that is easier to read and understand (Information Mapped)
- An increased number of and expanded procedural pamphlets
- Clarified and simplified processes.
- Standardized product formats, individual task numbering system, and task titles/verbs.
- Clarified and aligned individual and collective training strategies and supporting plans.
- Written and graphic links to other products, process phases, and TD-related systems (e.g., CBRS, PPBES) via flow charts (needed for automation).
- New TRADOC TD management guidance, including TD workload and manpower management and use of Foreign Disclosure restriction statements (result of TRADOC IG inspection) as well as safety, risk assessment/management, and environmental considerations (DA mandate) in all training/products. (POC - Rachel Serio, DSN 680-5576/e-mail serior@dcst.monroe.army.mil)

Gender Integrated Training (GIT): In October 1994 Forts Jackson and Leonard Wood began executing gender integrated Basic Combat Training (BCT) or GIT, as it has become known. Under GIT, female soldiers no longer attend BCT in all-female companies. Female soldiers are now intermixed with males in gender integrated companies (optimum mix 75% male/25% female). The BCT Program of Instruction (POI) and standards have not changed. TRADOC has formed a Steering Committee headed by CG, Fort Jackson, consisting of representatives from Forts Jackson and Leonard Wood, Fort Benning (BCT Proponent), Army Research Institute (ARI), HQ, TRADOC, and HQDA, ODCSOPS to monitor GIT implementation during this first year and develop recommended policy adjustments needed for successful long term implementation. The committees' final report to HQ TRADOC will be submitted in Jan 96 with any policy adjustments taking place in FY 96.

(POC - SFC Blakey, DSN 680-5621/e-mail blakeyc@dcst.monroe.army.mil)

Military Training Structure Review (MTSR):

In January 1993 the Services Interservice Training Review Organization (ITRO) initiated a three-year, Joint Chiefs of Staff supported, review of all initial skills training to eliminate training duplication and create savings. During calendar year 1993, Services consolidated Calibration, Helicopter Maintenance and Water Survival training. Services are now implementing the following consolidations/collocations approved in 1994: Welding - Army and Marine Corps at Aberdeen Proving Ground (APG), MD; Food Service - Army and Marine Corps at Fort Lee, VA; Civil/Construction Engineer - six sites/all services. Army sites are: Fort Leonard Wood, MO and APG, MD. In addition, Navy has moved Corrections Training from Fort McClellan, AL to Lackland AFB, TX. Army, Air Force, and Marine Corps are continuing plans to consolidate/collocate Motor Vehicle Operator Training at Fort Leonard Wood, MO in late FY 96. Army/Marine Corps are implementing cost effective changes to the consolidated Petroleum courses at Fort Lee, Va. On 30 May 1995, the ITRO Executive Board approved additional training consolidation/collocation as follows: Small Boat training (USA/USCG) at Fort Eustis, VA, and (USN/USCG) at Great Lakes, IL, Communications training (USA/USAF/USN/USMC) at Fort Gordon, GA, Lackland, AFB, and 29 Palms, CA, and Supply/Logistics training (USN/USMC) at Athens, GA. MTSR will be completed 1 Jan 96. However, ITRO will continue to review training in Mortuary Affairs, Electro-Optical, Instructor training, Training Technology and Information Warfare. ITRO will continue to review training and seek cost effective consolidations in the future. (POC - Mr Shepherd, DSN 680-5645/e-mail shepherd@dcst.monroe.army.mil)

Classroom XXI and Distance Learning (DL):

The soldier of the future will have access to knowledge via master instructors, master instruction and an Army Knowledge Network. Training in the future will be conducted in a "classroom without walls." Here DL contributes in two different ways. The technology will bring to the resident classroom external data and environments. This modern classroom will be electronically networked and capable of accessing digitized training materials, archived

materials and information from throughout the world. It will possess the ability to bring the battlefield into the classroom using a video teletraining network, computers, simulations and simulators. Students will be able to participate in horizontally and vertically integrated training scenarios with soldiers from other schools, CTCs, units and eventually other services. The second way the technology will affect Classroom XXI will be that soldiers will no longer have to be physically present to be a part of the "resident" training. They may be located at Unit learning centers, Armories or possibly their own residence. (POC - Mrs. Moore, DSN 680-5527/e-mail moorem@dcst.monroe.army.mil)

Diagnostics: Diagnostics consists of an assessment which identifies soldier strengths and weaknesses across the individual training hierarchy -- task through military occupational specialty (MOS). If a soldier needs remediation, the diagnostic will provide access to training or doctrinal materials to guide soldier improvement. Through on-line electronic libraries, soldiers with a computer and modem will be able to access diagnostics through the Internet or electronic bulletin boards from their units or homes, and may download materials for study at their convenience.

Potential uses for diagnostics are numerous and support all three pillars of leader development. Diagnostics will be used by soldiers to self-develop for new duty assignments or additional duties, sustain current knowledge, and to complete prerequisites prior to institutional training. Supervisors will use diagnostics to assess individual training readiness and to verify soldier knowledge prior to assignment of critical duties. Units can use diagnostics to access training during deployment or while in remote locations. Institutions will use diagnostics to ensure soldiers report to courses with prerequisite knowledge, tailor course plans of instruction to match soldier strengths and weaknesses, and allow soldiers to test out of some subject areas so they can focus on areas of weakness or pursue independent study.

ATSC is designing several diagnostics to demonstrate "proof of principle." These prototypes will showcase uses of diagnostics in functional courses, common subjects, and

MOS tasks. Common subjects currently under development include Training Management; Military Operational Terms and Symbols; Basic Map Reading; Map and Terrain Association; SOI, Codes and Authentication; Antennas; SINCGARS Net Control Station Procedures; and Field Wire Laying Techniques. In the MOS/duty position domain, diagnostics will soon be available for Unit Movement Officer and 13F Fire Support Specialist. POC - Ms. Spath, DSN 927-4785/e-mail Spathk@Eustis.emh20.mil

Total Army School System (TASS): The Total Army School System (TASS) was implemented as of 1 October, 1995 with the official standing up of the TRADOC Coordinating Element (TCE) at Fort Monroe, VA, and seven Regional Coordinating Elements (RCE). The RCEs are located at Fort(s) Devens (Region A), Lee (Region B), Jackson (Region C), Knox (Region D), McCoy (Region E), Sill (Region F), and Lewis (Region G). The TCE and each of the RCEs have their own Unit Identification Code (UIC) and operate as an independent organization. Staffing at the RCEs is made up of ten full-time personnel from all components (AC/USAR/ARNG).

An overarching TASS Operations Plan (OPLAN-2) was developed, staffed, and distributed to the Army Training Community with guidelines for TASS Implementation.

The TCE, TRADOC executive agent for TASS, supervises the RCEs and manages the TRADOC Quality Assurance Program and Policy. The RCEs are responsible for tracking training within their regions, assisting in the resolution of training issues, verifying corrective actions on accreditation issues, regional ammunition management, and oversight of Title XI soldiers. First and Fifth U S ARMY serve as the FORSCOM executive agents for TASS and are responsible for coordinating Annual Training (AT) locations, facilities, courseware, equipment, and assist in identifying training priorities for units. Army National Guard (ARNG) and U S Army Reserve Command (USARC) responsibilities include resourcing units to support individual training requirements, ensuring equipment availability based on training requirements, participating in the Structure and Manning

Decision Review (SMR), Training Requirements Review Panel (TRAP) processes, and maintaining coordination relationship with the RCEs. TRADOC Proponent Schools are responsible for Program of Instruction (POI) development, Instructor Certification, and school accreditation.

The TASS transition year is FY96, full implementation FY97, with school accreditation to begin in FY98. (POC - COL Lovett, DSN 680-5579/e-mail lovett@dcst.monroe.army.mil)

TRADOC Staff and Faculty Training Program: The Staff and Faculty Training Program is composed of three major elements: HQ TRADOC (DCST), schools/training battalions, and the Army Training Support Center. As the policy proponent, the DCST is responsible for standardizing, approving, and managing staff and faculty development which is required Army wide, TRADOC-wide, or at multiple TRADOC sites such as instructor training, small group facilitator training, and training development training. DCST offers consolidated centralized training manager training in the Senior Training Managers' Course and the Training Developer Middle Managers' Course. TRADOC and RC schools (training battalions) offer staff and faculty development using the mandated instructor training, the standardized Small Group Instruction Training course, and the Systems Approach to Training course. The TRADOC staff and faculty development elements also provide training to meet local requirements. The ATSC program is a centralized support system to develop and deliver standardized video teletraining for Active and Reserve Components (AC and RC) instructors as part of the Total Army School System (TASS). As program manager, ATSC will provide standardized training, course design, development, delivery (to include multimedia technology), certificates, course material reproduction, and student management. Under the TASS concept, AC and RC instructors can be linked via satellite to the proponent responsible for instructor training. ATSC's efforts currently focus on three standardized courses: Small Group Instructor Training Course (SGITC), Total Army Instructor Training Course (TAITC), and Video Teletraining Instructor Training Course (VTTITC). These courses have the option of being delivered in a

regular classroom setting or via distance learning technology to facilitate standardized cost effective training Army wide. Currently, the SGITC and VTTITC are available for use. The TAITC should be available in 4th Qtr FY 96. Other selected Staff and Faculty courses will be considered for conversion to delivery using distance learning technology in the near future. (POC - Dr. Spangenberg, DSN 680-5590/e-mail spangenr@dcst.monroe.army.mil)

Automated Instructional Management System-Redesign (AIMS-R): AIMS-R is the Army training information management system that provides U.S. Army schools, training centers, NCO Academies, and civilian training centers the capability to develop, administer, and monitor resident and non-resident (correspondence and self-development) individual training during peacetime and mobilization. AIMS-R is accessible to all Active and Reserve U.S. Army sites that have Defense Data Network (DDN)/Internet capability.

AIMS-R replaces five systems currently in use: resident training management system, Automated Instructional Management System (AIMS); non-resident training management system, TRADOC Educational Data System (TREDS/TREDS-R); Program of Instruction Management Module (POIMM); TRADOC Automated Training Scheduling System (TATSS); and Diagnostic Testing (DT). AIMS-R interfaces with seven external functional systems (ASAT, ACPERS, TAPDB, TRAVISS, RECBASS, ATRRS, and RFMSS) to exchange data needed to eliminate duplicative entries and to share information. AIMS-R is the source of training data from the MA-COMs/Institutions to ATRRS. The Functional Area Modules included in AIMS-R will:

Manage Training Development - Used to analyze task performance specifications to design and develop individual training courses following a structured relationship between learning objectives. Multiple equivalently weighted tests are created from an item bank. Tasks are imported from the Automated Systems Approach to Training (ASAT). A training critique for use by the student is included in this module.

Manage Test - Provides an objective/test item bank which allows performance based tests to

be administered. This module allows the assignment of instructors (proctors) to an exam. Assigns graders. Prints and presents exams. Captures electronic, telephonic, and marksense responses, scores exams, posts gradebooks, and facilitates the evaluation of training effectiveness.

Manage Scheduling - Manages the training calendar. Determines the number of classes/sections. Manages event templates, non-POI events, and non-training events. Builds the FY schedule and the class training schedule, and embraces total installation scheduling to include ranges and facilities.

Manage Training Material Inventory - Manages stockage/restockage levels. Ships and receives materials. Maintains inventory and maintains the materials budget. Supports the planning, control, and distribution of course/test materials to instructors and students.

Manage Student - Supports enrollments and maintenance of student information, graduations, attritions, and discharges. Maintains student records and manages inprocessing and outprocessing of students. Interfaces with other systems such as ATRRS, ACPERS, and TAPDB.

Manage Gradebook - Allows authorized users to update student grades and to produce interim and final reports of student performances. Manages Academic Honors Criteria, the Army Physical Fitness Test (APFT), Basic Rifle Marksmanship (BRM), and the Body Fat Record. This Module includes the Aviation Module to support requirements that are unique to flight training.

Manage Historical Data - Stores historical data with current data for 4 years at which point the data is either purged from the system, or moved to the AIMS-R archive database where it is retained for a period of 36 years.

AIMS-R is the cornerstone for integrating the individual and institutional pillars of training under the Army Warrior XXI initiative. The Army Training Support Center (ATSC) is the executive agent for the program, and the Army Training Information Systems Directorate (ATISD) is the functional proponent for the

development of AIMS-R. (POC - Mr. Don Gough, DSN 927-4881/e-mail Goughd@eustis-emh20.army.mil).

Automated Systems Approach to Training (ASAT): ASAT is a software application which supports total Army training development, support, and information management. Its capabilities include total task management and production of battle-focused training and training products. It supports the digitized battlefield. The system provides the capability to create, modify, and manage tasks and links tasks to TADSS, doctrine, unit type, TOEs, missions, BOSSs, echelons, references, major end items, occupational specialties, and courses. These linkages then produce unlimited capability for outputs including the production of Mission Training Plans (MTPs), Soldier Training Publications (STPs), and Drill Books. Also, a query of any type on the information in the system is possible, e.g., what are the collective tasks which support a specific unit type? The system software is complimented by a CD-ROM which consists of all of the Army's digitized inventory of MTPs, STPs, and Drill Books. ASAT is integrated with the Automated Instructional Management System-Redesign (AIMS-R) and the Standard Army Training System (SATS) providing for the dynamic exchange of standardized task based information from the institution to the unit. (POC - Mrs. Maria Gauthier, DSN 927-4881/e-mail Gauthiem@eustis-emh20.army.mil)

WARFIGHTER NETWORK:

Warfighter Network (WARNET) XXI: WARNET XXI is the TRADOC initiative to reinvent Army Modernization Training (AMT) and training subsystem acquisition. WARNET is the training portion of the Army's "Equipping the Force" axis of Joint Venture; i.e., the documentation and standardization of training requirements, training products, and training outputs associated with the acquisition of materiel/weapon systems and training aids, devices, simulators, and simulations (TADSS). WARNET XXI goals are to: integrate training support needs into system/hardware requirements to ensure a cost and training effective training subsystem is developed and fielded with the system; develop and provide system TSPs to support testing, New Equipment Training (NET), and

institutional/unit training needs; and ensure system training support packages (TSP) and supporting training products are digitized in accordance with standards and integrated into the Army Training Digital Library (ATDL) to support a fully digitized Force XXI. WARNET XXI consists of five components which relate to the corresponding components of Warfighter XXI and Warrior XXI. The five components are:

Force XXI modernization and training needs.

Needs Analysis. The process of using existing methodologies and procedures to identify and prioritize system, training subsystem, and TADSS requirements to support Force XXI modernization and training needs.

Requirements Documentation. DOD and Army standardized documents required by public law and regulatory guidance which are used to define and authorize the development and procurement of materiel systems, training subsystems, and TADSS. This category also includes supporting documents and program master plans which address training strategies.

Training Products. Items of materiel developed and/or procured under the authority of DOD 5000-Series Directives to support force modernization and training. This includes training support products and system TSPs.

Test and Evaluation. A formal process for determining if materiel systems, training subsystems, and TADSS in development or under consideration for procurement fulfill the approved operational, technical, and/or training requirement.

ATDL. A digital repository for storing and retrieving training and training support information.

The components are sequential and important to ensuring a cost and training effective training subsystem is fielded to support a system's initial operational capability. (POC - Mr. Ronneberg, DSN 927-2546/ e-mail Ronnebed@eustis-emh20.army.mil)

LEADER DEVELOPMENT



"Today's Army is growing into the future precisely because we have invested the time, money, human ingenuity, and hard work in leader development over nearly two decades. As we grow we must retain the essence of our leader development process - its warfighting focus. The basics must come first: troop leading procedures; the command estimate process; and intelligence preparation of the battlefield, to name a few." These thoughts from GEN Sullivan will focus our efforts in the future. We will strive to maintain the finest leader development system in the world in all areas. Some key initiatives are:

Common Core: Common core, common military, and directed/mandated training are being incorporated into a single task list for each leader development course. This common core revision project consist of four phases; Phase I is the development of vertically aligned common core task lists, Phase II is the horizontal alignment of tasks across officer, warrant officer, and noncommissioned officer courses and the approval of common core task lists. Phases I and II were completed as of 13 Nov 95. Phase III is the revision/development of task summaries and training support packages/products (TSP) and training implementation, Phase IV is the conversion of TSP and task summaries to CD-ROM. Training will be developed and implemented by levels. First priority is entry, precommision, preappointment, platoon level - PLDC, BNCOC, ANCOC, WOCS, WOBC, and OBC. Second priority is company level - FSC, WOAC, and OAC. Third is battalion level - BSNOC, SMC, CSMC, WOSC, WOSSC,

CAS3, and CGSOC. The goal is to implement training 31 Dec 96. (POC - Mr. Ligon, DSN 680-5661/e-mail ligonj@dcst.monroe.army.mil)

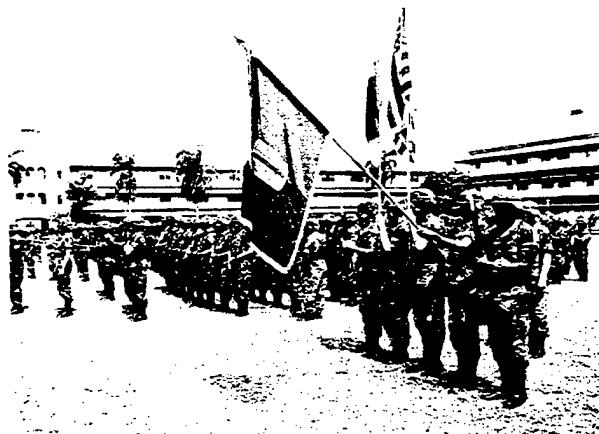
Captain's Professional Military Education

(PME): TRADOC is leading a study of the timing and methodology for training Captains to ensure synchronization of training with assignments, i.e. *SELECT-TRAIN-UTILIZE*. Advanced Courses appear to be timed about right (normally after the first operational assignment). However, while CAS3 produces a superb product, there are two concerns. First, given the current OPTEMPO in our units, the 9 week TDY during operational assignments concerns many senior field commanders. Secondly, Captains are currently attending CAS3 during their second or third operational assignments; after they have held positions that needed CAS3 training.

Goal is to brief a new concept to the CSA during 2nd QTR, FY 96 with implementation during FY97. (POC LTC Kichen 680-5618/e-mail kichenl@dcst.monroe.army.mil)

ORGANIZATIONS

We have observed through constructive and virtual simulation that significant increases in lethality, survivability, and tempo are possible in existing organizations using current doctrine when digital communications are integrated horizontally and vertically across combined arms teams.



Currently the Force Design Directorate, TRADOC is involved in developing the organizational designs for Force XXI. This involves a series of briefings to the Army's

senior leadership in an effort to restructure the Army to meet future challenges. This requires the integration of new technologies, organizations, and doctrine. Upon completion, we expect a more flexible, lethal, modular Army capable of performing a myriad of mission across the entire spectrum of conflict.

The Division Redesign effort consists of several elements. The redesign effort consists of the development of organizations and doctrine done by Force Design Directorate, TRADOC, and the Battle Lab for Combat Developments, TRADOC, respectively. Several Army Warfighting Experiments (AWEs) and simulations are being conducted to analyze and test new equipment. Finally, a brigade of the 4th Infantry Division will be organized and equipped as the test organization in FY 97 and undergo a rotation at the National Training Center. The results of this test will influence the composition of Army divisions.

Force Design Directorate has two primary functions. It is the executive agent for the Army in monitoring the Total Army Analysis process which determines the total force requirements for the Army. As the proponent of the Force Design Update (FDU) process, it evaluates and presents for approval organizational issues raised from the field Army or the proponent schools through the Army's senior leadership. Final approval of the FDU process is by the Chief of Staff of the Army.

Top Down Force Design and Organization Modularity:

Based on the Modularity Concept, TRADOC will continue development of modular, functionally-based force that can better support the current force and are aligned with Force XXI development initiatives (examples of modular organizations are provided below). The Top Down Force Design concept focuses on development of organizations designs that eliminate redundant "Cold War" Headquarters and streamline other force C2 structure and organizations. Near term Top Down Force Design/Modularity efforts are designed, evaluated and approved through the semi-annual Force Design Update (FDU) process and executed in the Total Army Analysis (TAA) process. Far term Top Down Force Design/Modularity efforts will be integrated into Force XXI development

initiatives. Goal is to field an "Adaptable" Force with improved force tailoring, adaptive packaging and deployability. (POC - CPT Healy, DSN 552-8686/e-mail HEALYS@leav-emh1.army.mil)

a. Following proposals were developed by their respective proponents and staffed/briefed worldwide to all CINCs, ABCC, Corps and DA Staff by the Force Design Directorate. The six month process culminated in a decision brief to the VCSA to approve the proposed organizational concepts as Army requirements. Approval of an FDU proposal initiates TOE development for subsequent resourcing competition in the Total Army Analysis (TAA) process.

(1) EPW Brigade Liaison Detachment (BLD): Proponent-Military Police School. The purpose of this concept is to consolidate the existing EPW Battle Command capability into one brigade, thus reducing overall manpower requirements. The BLD concept calls for modular twelve member detachments to expand the EPW brigade commander's span of control, staff planning, coordination, and supervision capabilities beyond current doctrinal limitations. The anticipated impact on Total Army personnel requirements is a reduction of 169 spaces due to consolidation of the Army's EPW Command and two EPW Brigades into one EPW Brigade with modular BLD Detachments. Concept approved. (POC: MAJ Uphoff, DSN 552-8638/email uphoffb@leav-emh1.army.mil)

(2) Enhanced Army Special Operations Forces (ARSOF) Logistics Support: Proponent-Special Operations Command. The purpose is to enhance ARSOF CS\CSS through modularity by providing mortuary affairs, fabrication and renovation, and laundry and bath services to support ARSOF units. Doctrinally, the Army service Component Commander (ASCC) is responsible for providing CSS to deployed ARSOF units. In those increasing situations where the ASCC is unable to provide all necessary CSS to ARSOF units, the Special Operations Support Battalion (SOSB) must deploy adapted CSS asset packages. The SOSB is not adequately structured to provide a full support package and, therefore, must be augmented. This proposal will add one 43-man General Support Co to the 526th SOSB. Enhanced ARSOF

Logistics Support (GSC) concept approved. Concept approved. (POC: MAJ Long, FDD, DSN 552-8659/ e-mail longk@leav-emh1.army.mil)

(3) Enhanced Army Special Operations Forces (ARSOF) Signal Support: Proponent-Special Operations Command. Provides increased communications support to overseas presence SOF. Currently, two of the three overseas presence SOCs do not have dedicated SOF communications support. This proposal will add three 15-man and one 4-man signal detachments to USASOC's 112th Signal Battalion. The concept calls for each signal detachment to be forward stationed, attached to ASCC, and OPCON to the SOC. Concept Approved. POC: MAJ Long, FDD, DSN 552-8659/ email longk@leav-emh1.army.mil).

(4) Fire Support Element (FSE) for EAD Aviation Brigade: Proponent--Field Artillery School. Purpose is to create a corps attack regiment FSE in each corps aviation brigade to enable synchronization of fire support planning, fires coordination and execution for the corps aviation attack assets. Each 6-man FSE will be documented as a modular derivative to the Corps Artillery HHB and will be attached to meet specific MACOM or theater requirements. Concept approved. FSE for Corps Aviation attack Regiment. Concept approved. (POC: MAJ Engebretson, DSN 552-8677/e-mail engebres@leav-emh1.army.mil)

(5) MI Reserve Component (RC) Redesign: Proponent-MI Center. The purpose is to modularly redesign the RC MI organizations as a follow-on to the AC MI FDU, approved January 1993. The proposed design moves away from fixed company/battalion team structure and moves toward a large number of small modular teams which are oriented by region to augment AC organizations. Teams are modular and can be force packaged by derivative. UIC to support force projection operation. Reduction in personnel equipment requirements and modernization efforts will be realized. MI RC Redesign. Concept approved. Concept approved. (POC: Miss Rose, DSN 552-8672/e-mail roseb@leav-emh1.army.mil)

(6) Movement Control Reorganization: Proponent Chief of Transpor-

tation. Purpose is to design an adaptable movement control structure for ARFORs, corps and divisions with required deployable command and control capability. Existing movement control teams will be modularized with increased interoperable capability supporting movement control for force deployments and theater operations. The reorganization provides primary staff for EAC and corps movement control battalions and movement control teams capable of 24-hour operations. Concept approved. (POC: CPT Sampson, FDD, DSN 552-8631/e-mail sampsonk@leav-emh1.army.mil)

(7) EOD Reorganization (Modular): The EOD Reorganization changes the organization and designation of the Explosives Ordnance Detachment Control Team (EODCT) to Ordnance Battalion. It also changes the organization and designation of the Ordnance Detachment to Ordnance Company. This reorganization strengthens the battalion command and control functions, changes team composition and improves the EOD battlefield capability and mobility by increasing the number of EOD response teams and by eliminating unessential/burdensome team equipment. (POC: CPT Sampson, DSN 552-8631/e-mail sampsonk@leav-emh1.army.mil))

(8) Mortuary Affairs Support Designs (Modular): This concept/design provides peacetime and wartime support to search, recover, identify, evacuate, and when required, temporarily inter, disinter, and re-inter deceased personnel. Implementation of this program will eliminate the six current nonstandard unit designs and replace them with two MA Collection Company designs that provide modular support to a force projection Army tailored to theater requirements. (POC: Mrs. Peterson, DSN 552-8626/e-mail peterss1@leav-emh1.army.mil)

(9) Shower, Laundry, and Clothing Repair Concept: Proponent - Quartermaster School. The purpose is to provide deployable shower, laundry, and clothing repair services to soldiers forward from corps to brigade. Rear areas will be supported by Host Nation Support, and/or quartermaster field service companies. The quartermaster field service company will be able to support a force of 21,000 personnel with a minimum of

one shower and a maximum of 15 pounds of laundry per soldier per week to be delivered in 24 hours. A modular field service section can support a BDE size element of 3500 personnel.

This proposal increases laundry capability and reduces personnel and water requirements by taking advantage of equipment modernization efforts when the Laundry and Dry Cleaning System (LADS) replaces the current M85. (POC: Mrs. Peterson, DSN 552-8626/e-mail peterss1@leav-emh1.army.mil)

b. FDU 95-2: The following issues are pending review by the Assistant Deputy Chief of Staff, Operations - Force Development with the exception of the Rail Reorganization which was approved at TRADOC.

(1) Aviation Modularity (Split based Operations). Proponent-Aviation School. The purpose is to implement modularity so aviation units can conduct and sustain 2 separate simultaneous operations (Split Based Operations), and to identify all personnel and equipment needed to support employment of aviation elements below battalion level (Aviation Modularity). Split Based Operations requires the elimination of critical single density personnel and equipment in Aviation brigades, battalions, and support organizations. It also requires moving the Class III/V handling assets in Light and Airborne Division Aviation Brigades into the battalions. Aviation Modularity requires changing aviation organizations to provide TOE visibility of the elements needed to perform Split Based Operations. This Aviation Branch Chief approved proposal documents MSTs designed to support the smallest deployable unit (SDU) which is usually a company-level organization. Documentation change will not generate significant personnel or equipment bills. (POC: MAJ Engebretson, DSN 552-8677/e-mail engebres@leav-emh1.army.mil)

(2) GS Electronic Maintenance Reorganization. Proponent: CASCOM. Purpose is to consolidate three separate TOE (43549LH, 43549LI, 43549LJ) into one GS Electronic Maintenance platoon. Current structure does not allow the flexibility needed to provide electronic repair support for contingency and follow on forces. The placement of automated test equipment (ATE) is only in one of the three platoons, although all

platoons require this test equipment. The new structure supports modularity, improves repair capability and deployment planning, does not change doctrine and saves 329 spaces. (POC: Mrs. Peterson, DSN 552-8626/e-mail peterss1@leav-emh1.army.mil)

(3) Transportation Rail Reorganization. Proponent- CASCOT. Purpose is to design a modular rail structure capable of deploying only a minimal force in order to provide rail operation in theater. Converts existing battalion's four single function companies to multifunctional Rail Operating Companies each capable of providing total rail operations over 40-60 miles of track. The rail battalion is a one of a kind organization that falls in on and operates existing infrastructure in theater. All force structure is in the USAR. There is no increase in personnel or equipment, but the unit becomes more deployable and more capable. (POC: CPT Trauger, DSN 552-8625/e-mail traugert@leav-emh1.army.mil)

(4) Light Infantry Division Maintenance Reorganization. Proponent- CASCOT. Purpose is to provide the Light Infantry division with full MARC to make the LID self-sufficient for DS maintenance. LID maintenance TOE were severely constrained due to Army of Excellence strength and sortie limitations. The LID TOE (43217L AND 43218L) were reviewed and full MARC applied, resulting in a growth of 59 soldiers. Savings from Corps level maintenance plugs that had offset the AOE capability shortfall resulted in total savings of 578 spaces. LID reorganization has been approved by TOE Review Board pending FDU results. Proposal is consistent with all Force XXI divisional CSS redesign efforts, so will still be operative in a Force XXI Army. Implementation decision will be on hold pending Force XXI Division Design decision. (POC: CPT Sampson, DSN 552-8631/e-mail sampsonk@leav-emh1.army.mil)

(5) Diving Reorganization. Proponent- Engineer School. This concept provides commanders with the required engineer diving forces at theater Army through brigade level. Converts existing teams into modular, more deployable Heavy and Light teams. Heavy teams orient toward port areas, Light teams (much more mobile) operate in the Corps area. Diving forces will dominate and

thoroughly exploit the underwater environment (battle space) from the theater/corps ports, harbors, and coastal zones to the most forward rivers in a brigade's area of operation. The concept provides updated doctrine and revised organizations to support offensive, defensive, retrograde, river crossing, riverine, joint riverine, deception, port terminal, logistics-over-the-shore, joint logistics-over-the-shore, transportation watercraft, area damage control, and post-conflict operations. Reference: ARATEP 5-500-24-MTP, Engineer Diving Teams (Hvy/Lt) (POC: LTC Lepley, DSN 552-8621/e-mail lepleyd@leav-emh1.army.mil)

(6) MLRS Battalion Fire Direction Officer and Battalion Motor Officer. Proponent- Field Artillery School. Purpose is to improve the capability of the non-divisional MLRS Bn to coordinate joint, deep fires by adding a Bn Fire direction Officer (O3), due to the increased range and lethality of the MLRS Family of Munitions(MFOM) and proliferation of long range sensors. Purpose is to improve the capability of the MLRS Bn to perform maintenance and sustainment operations, since the Bn S4 must focus more on management of MFOM. Standard FA battalions currently have these positions. Adds 2 slots per Bn. Bill is 24 AC, 16 RC. (POC MAJ Hardin, DSN 552-8666/e-mail hardind@leav-emh1.army.mil)

(7) Q-37 Target Acquisition Detachment for Corps Artillery. Proponent- Field Artillery School. Purpose is to provide Corps with organic Target Acquisition capability by adding a Q-37 TAD per Corps. Uses the TOE of an existing, effective organization to provide the capability. Each CTAD consists of 1 officer, 2 warrant officers and 36 enlisted soldiers. QTADs to support four light divisions are already on the ground. Provides Corps commander with a wide variety of METT-T driven employment options. Army owns sufficient equipment to support requirement. Organization could replace a non-standard TAB in Europe, saving spaces in Europe. Bill is 117 AC/ 39 RC. Strongly supported by DCSOPS. (POC MAJ Hardin, DSN 552-8666/e-mail hardind@leav-emh1.army.mil)

(8) Increased Division Advanced Quick Fix. Proponent- MI School. Purpose is to increase the number of AQFs at Division from 3 to 4. There is no procurement

issue in fielding the AQF, as the plan is to redistribute existing assets. (POC: Miss Rose, DSN 552-8672/e-mail ROSEB@leav-emh1.army.mil)

(9) Division Command Post Security and Division Central Collection Point Operations. Proponent- Military Police School. Purpose is twofold: (1) Fill the void created by the elimination of the Band's secondary mission of augmenting Division MPs in the conduct of Division CP security and Division Central Collection Point (DCCP) operations, and (2) Correct AOE deficiencies in MP force structure. HQDA approved a new mission statement that eliminated the Band security augmentation mission, implemented to offset MP force structure reductions in AOE. Proposal standardizes all divisional GS MP platoons at 30 personnel (3x9 soldier squads, and a 3 soldier platoon HQ). This proposal restores MP force structure consistent with mission requirements. TRADOC command position is to restore the divisional bands secondary security mission or failing that, to recommend this proposal. (POC: MAJ Uphoff, DSN 552-8638/e-mail uphoffb@leav-emh1.army.mil)

(10) Theater Tactical Signal battalion. Proponent- Signal Center. Purpose of this ISC-sponsored, Signal-supported proposal is to redesign two battalions (86th & 40) of the 11th Signal Brigade, Ft Huachuca. Design objective is to convert an EAC CONUS-based contingency Signal Battalion and a Command Operations Battalion into functional and modular-oriented signal units. The redesign converts non-standard units into standard TOE battalions, improves training and operation, fixes Desert Storm/Shield deficiencies, improves deployability, minimizes excessive task organization, and provides a bridge to future signal designs. Battalions will be better able to meet long term communication and information needs of Army Service Component Commanders, JTF Commanders, ARFOR Commanders, CINCs. Minor equipment requirement is manageable through redistribution of existing excess equipment, and there's no personnel bill. (POC Mr Wittenburg, DSN 552-8685/e-mail wittenbd@leav-emh1.army.mil)

(11) Civil Affairs/PSYOPs Planners at Corps and Division. Proponent- USASOC. Purpose is to provide minimum

manning levels required for Corps and Division commanders to effectively plan for, integrate, and conduct CA and PSYOP throughout the full range of military operations. Results from lessons learned from previous operations and the new operational environments the Army faces in the future. Traditional augmentation from US Army Civil Affairs and Psychological operations Command (USACAPOC) is not adequate and does not reach units in a timely manner. Anticipated increase in personnel is 34 AC/ 24 RC based on 4 corps and 10 divisions. (POC MAJ Long, DSN 552-8659/ e-mail longk@leav-emh1.army.mil)

(12) Army Service Component Command (ASCC). The ASCC design objective is to develop an ASCC TOE that supports the three roles of the ASCC, performing Title X functions, provide an operational force to the CINC and provide a support force to the CINC. The ASCC must be robust enough to designate elements of the headquarters to form an Army Forces (ARFOR) Headquarters and/or a Joint Force Land Component Command (JFLCC) Headquarters and/or a Joint Task Force (JTF) and still retain the capability to continue functions as an ASCC Headquarters. Anticipate approval of this issue in January 1996. (MAJ Sepulvado, DSN 552-8668/e-mail sepulvaj@leav-emh1.army.mil)

MATERIEL

Continued budget cutbacks and downsizing of our force have made it imperative that the Army analyze future warfighting capabilities of the force by evaluating, identifying, and prioritizing "Critical" battlefield systems that best support the Army's "Vision of the Future Battlefield." TRADOC, as the architect of the future Army, has the responsibility to provide an organized, trained, and well equipped modern force capable of maintaining the battlefield edge and to achieve Land Force Dominance as the Army transitions into the 21st century. A means of achieving this goal is the leveraging of technology and modernization of our future organizations, so necessary if we are to maintain the combat superiority we now enjoy. In the next few years, you will see a multitude of system upgrades and fieldings. Some of the materiel improvements are:

M4 Carbine: A shortened variant of the M16A2 rifle which will replace all M3 .45 Caliber Submachineguns and selected M16A2 rifles and M9 pistols. Eighty percent commonality of parts with M16A2. FUE FY95. (POC: Mr. Schmidt, DSN 680-2415/ e-mail Schmidth@ emh10.monroe.army.mil)

Medium 7.62mm Machine Gun

Upgrade: The Army is conducting a test and evaluation to select a more reliable weapon to replace M60 machine guns in Active Component infantry units. Primary candidates are the M60E4 from SACO Defense or the M240E4 from FNMI. Both of these models are modified versions of an existing weapon. Providing production funding is secured, first unit equipped for the upgraded 7.62mm MG is scheduled for 1QFY97. (POC: Mr. Schmidt, DSN 680-2415/ e-mail Schmidth@ emh10.monroe.army.mil)

M113A3 (Upgrades): These improvements will allow the M113 mobility, matching the rest of the maneuver forces. Upgrades to the M113 consist of external fuel tanks, A3. Reliability Improvement of Selected Equipment (RISE) Power (engine and cross drive transmission upgrades), enhanced armor protection, ramp and belly armor, and improved driver controls. FUE FY94;

completion FY02. (POC: LTC Michael King, DSN 680-3949/ e-mail kingm@ emh10.monroe.army.mil)

Bradley Modernization: The A2 ODS and the Bradley A3 will evolve from the A2. ODS (FUE FY96) addresses required fixes identified during Operation Desert Storm. Those fixes include a combat identification system, GPS/POSNAV, driver's vision enhancer and missile countermeasure device. The Bradley A3 (FUE FY00) is the objective system. Planned A3 improvements are core electronic architecture, 2d generation FLIR acquisition, command and control software, commander's independent viewer and ballistic fire control. (POC: MAJ George Conrad, DSN 680-4083/ e-mail Conradg@ emh10.monroe.army.mil)

Bradley Stinger Fighting Vehicle -

Enhanced (BSFV-E): Enhanced BSFV is a series of modifications to upgrade the current BSFV to an automated air defense system. The enhancement means that the BSFV will no longer be an armored taxi for manportable Stinger gunners (MANPADS) but an actual fire unit akin to the Avenger. The BSFV-E will have a four-missile Standard Vehicle Missile Launcher (SVML) to replace the TOW launcher. Other modifications will include a Stinger reticle in the Integrated Sight Unit (ISU) and various other improvements that will permit launching of Stinger missiles against cued aerial targets without the need for the gunner to dismount. Eight BSFV-E weapon systems and two BSFV- E Platoon Leader Vehicles will participate in the Brigade 97 AWE. FUE FY97. (POC: Mr. Ebner, DSN 680-2948/ e-mail Ebnerj@ emh10.monroe.army.mil)

Thermal Weapon Sight (TWS)

AN/PVS-13: A replacement for the AN/PVS-4, AN/TVS-5 and AN/PAS-7, this sight uses thermal technology which performs well in severe darkness, adverse weather and obscurant. It has one main body and three interchangeable front optics which change field of view, power, and range. FUE FY96. (POC: Mr. Schmidt, DSN 680-2415/ e-mail Schmidth@ emh10.monroe.army.mil)

Multi-Purpose Individual Munitions/Short Range Assault Weapon

(MPIM/SRAW): The Army has entered into a cooperative program with the USMC to develop a shoulder-fired multipurpose weapon to replace the AT4 and the M72 LAW. The Army's warhead developed in the tech base Multi-Purpose Individual Munitions (MPIM) program is connected to the flight module developed by the USMC for their SRAW. The Army's MPIM/SRAW will weigh about 20 lbs and be about 36 inches long in the launch container. It is a fire and forget, inertially guided, fire from enclosure system with very high probability of hitting a bunker at ranges up to 300 meters. FUE is FY00. (POC: CPT Siegmund, DSN 680-2980/ e-mail Siegmunj@ emh10.monroe.army.mil)

Improved Mortar Ballistic Computer

(IMBC): Replaces current 23 MBC. The IMBC will use state-of-the-art technology to provide digital message capability and mortar firing data communications. Funding for FP1 only; FUE FY97. (POC: CPT Siegmund, DSN 680- 2980/ e-mail Siegmunj@ emh10.monroe.army.mil)

Commercial Space Package (CSP):

The concept behind the CSP is to field a limited, but affordable, near-term space support capability in each of our fielded corps and divisions, today. CSP is one of several initiatives in TRADOC intended to transition the Army into the 21st century. CSP consists of commercial satellites and ground terminals networked to provide JTF/Army commanders with robust communications, weather, and multi-spectral imaging capability. FUE FY95. (POC: MS Laine Brickhouse, DSN 680-2204/ e-mail Brickhol@ emh10.monroe.army.mil)

Air Volcano: UH-60 mounted mine launcher, can dispense 960 mines in less than 30 seconds. FUE FY95. (POC: Mr. Morison, DSN 680-2285) email Morisona@ emh10.monroe.army.mil)

Kiowa Warrior: Advanced Armed Reconnaissance Helicopter capable of flying in day or night: Weapon systems consist of Hellfire Missiles, 2.75" rockets and .50 Cal MG. Congress has approved the buy of 383 Kiowa Warrior's to be fielded in cavalry units

and Light Division Attack Helicopter Battalions. Currently, 48 percent of the units are fielded, to include much of the XVIII Airborne Corps. Fielding should be complete by FY98) (POC: MAJ Neely, DSN 680-2300/ e-mail Neelyc@ emh10.monroe.army.mil))

Combat Identification: This horizontal technology initiative is a multi-phased program to field combat identification devices to complement improvements in DTLOMS. Combat Identification program is being worked with other services and Allied/Coalition partners. Program combines situational awareness and improved target identification to reduce fratricide risk. Quick-fix devices, employing currently available technology (NVG and thermal), will be followed by battlefield combat identification system (BCIS). BCIS is a millimeter wave question-and-answer friendly identification device. Integration of BCIS and mid/far-term program with digitized battlefield being worked. BCIS currently in EMD testing with fielding decision to follow Task Force XXI. (POC: Mr. Hammond, DSN 680-5864/ e-mail Hammondb@ emh10.monroe.army.mil)

Longbow Apache:



The Longbow Apache consists of a Multi-Millimeter Wave Fire Control Radar, a Radio Frequency Interferometer and Longbow Hellfire missile. System provides a true fire-and-forget adverse weather capability. Results of this system show quantum improvement in combat effectiveness. FUE is FY97. (POC: MAJ Neely, DSN 680-2300/ e-mail Neelyc@ emh10.monroe.army.mil))

Advanced Field Artillery Tactical

Data System (AFATDS): A lightweight, distributed architecture computer network that provides command, control and fire direction functions for FA and coordination and planning functions for FS agencies. FUE FY96. (POC: MAJ Burke, DSN 680-2820/ e-mail Burkeg@emh10.monroe.army.mil)

XM915/916 Dual Purpose Improved Conventional Munitions (DPICM),

105mm Cartridge: DPICM projectile has a submunition payload of 42 dual purpose XM80 submunitions with improved lethality and self-destruct fuse. XM915 is compatible w/M119A1 Howitzers and XM916 is compatible w/all 105mm Howitzers. FUE N/A. IOC 4QFY97. (POC: MAJ Burke, DSN 680-2820/ e-mail Burkeg@emh10.monroe.army.mil)

Firefinder (FF) AN/TPQ-36 Block II:

The Block II Program consists of upgrades to HMMWVs and a Lightweight Multi-Purpose Shelters (LMS). Improvements will reduce emplacement/ displacement, drive on/off C-130 capabilities, self survey, reduced crew size (8 to 6) and remote operations. Self survey capabilities improves survivability through mobility. FUE 2QFY96. (POC: CPT Pace, DSN 680-2177/ e-mail pacep@emh10.monroe.army.mil)

Meteorological Measuring Set (MMS)

AN/TMQ-41: MMS is a mobile, fully automated non-radiating artillery meteorological (Met) system capable of hourly atmospheric soundings and Met computations of the atmosphere up to 30km. The system will be capable of multi-radio sound tracking. FUE 1QFY96. (POC: CPT Pace, DSN 680-2177/ e-mail pacep@emh10.monroe.army.mil)

Hydrogen Generator (HG) AN/TMQ-

42: The HG will be a mobile system capable of producing 150 cubic feet of hydrogen gas per hour for filling meteorological balloons used by field artillery meteorological sections and store 300 cubic feet. FUE 3QFY96. (POC: CPT Pace, DSN 680-2177/ email pacep@emh10.monroe.army.mil)

Army Tactical Missile System (ARMY-TACMS) Block Ia:

A modification of the current Army-TACMS Block I, Block Ia will provide the capability to attack targets at ranges in excess of 300km. The payload will be reduced from 950 M74 anti-personnel, anti-materiel (APAM) bomblets to approximately 275, which more than doubles the Block I range using the same motor. Block I guidance is inertial, utilizing a ring laser gyro and is totally autonomous after launch. The Block Ia missile will incorporate a global positioning system (GPS) receiver as well, to update missile position in flight and increase accuracy to maintain effectiveness at greater ranges. FUE FY98. (POC: Mr. Hurst, DSN 680-2178/ e-mail Hurstj@emh10.monroe.army.mil)

M109A6 Self-Propelled (SP) 155mm

Howitzer (Paladin): A product improved M109A2/A3. Incorporates all A4 and A5 improvements plus provides self-locating, self-laying, on board automated fire control, increased range, responsiveness, reliability, and crew survivability. Complete fielding FY99. (POC: MAJ Burke, DSN 680-2829/ e-mail Burkeg@emh10.monroe.army.mil)

M109A4 SP 155mm Howitzer:

A product improved M109A2/A3. Intermediate step required before or simultaneously applied during conversion to M109A5. Materiel Change improves NBC and RAM conversions ongoing. (POC: MAJ Burke, DSN 680-2820/ e-mail Burkeg@emh10.monroe.army.mil)

M109A5 SP 155mm Howitzer:

A product improved M109A2/A3/A4. Materiel Change adds a modified armament system-- same tube as Paladin (M109A6) allowing M109A5 to fire M203 charge and obtain same range as Paladin--30km. Conversions ongoing. (POC: MAJ Burke, DSN 680-2780/ e mail Burkeg@emh10.monroe.army.mil)

M119A1 Towed 105mm Howitzer:

Air transportable and air dropable with increased range (19km) and responsiveness. Fires all 105mm ammunition plus new M913 HERA and XM 915 DPICM. Complete fielding 4QFY95. (POC: MAJ Burke, DSN 680-2820/ e-mail Burkeg@emh10.monroe.army.mil)

Joint Tactical Ground Station

(JTAGS): An air transportable, information processing system which receives and

processes in theater, direct down-linked data from Defense Support Program Satellite-based sensors. Disseminates warning and alerting of ballistic missile launches, predicts impact point and time, and estimates launch point. Provides data to TMD Active Defense, Attack Operations and Passive Defense Operations. FUE FY97. (POC: Mr. Woolever, DSN 680-2932/ e-mail Wooleve2@ emh10.monroe. army.mil)

Battalion Mortar System: Will replace 4.2 inch mortar. Max range 7200 meters/min range 200 meters. System procured in two configurations, towed version (M120) and carrier version (M121) mounted in M1064. FUE (M120) 4QFY93; FUE (M121) 3QFY95. (POC: CPT Siegmund, DSN 680-2980/ e-mail Siegmunj@ emh10.monroe.army.mil)

Wide Area Munitions (WAM): WAM is a ground emplaced munition which detects and then attacks vehicles from the top at ranges of up to 100 meters. The hand emplaced version (HEWAM) will be fielded in FY97. (POC: Mr. Morison, DSN 680-2285/ e-mail Morisona @ emh10. monroe.army.mil)

Javelin: A man-portable anti-tank system for the U.S. Army and U.S. Marine Corps. The system provides high lethality against conventional and reactive armor and will replace the Dragon. The Javelin is comprised of two major components: a reusable command and launch unit (CLU) and a missile sealed in a disposable launcher container. The CLU incorporates an integrated day/night sight and provides target engagement capability in adverse weather. The CLU may be used in stand-alone mode for battlefield surveillance and target detection. FUE FY96. (POC: CPT Siegmund, DSN 680-2980/ e-mail Siegmunj@ emh10.monroe.army.mil)

Enhanced Tactical Radar Correlator

(ETRAC): A tactical mobile ground processor (normally at Corps) for receiving advanced synthetic aperture radar system (ASARS) data received from U2R via a direct data downlink. ETRAC's major function is to provide ASARS imagery to Modernized Imagery Exploitation System (MIES) for exploitation, situation and target development. It is C-130 self-deployable. XVIII Airborne Corps received the first ETRAC in May 1995.

The second system is slated for V Corps in FY96. (POC: Mr. Waller, DSN 680-3441/ e-mail Wallerj@ emh10.monroe. army.mil)

Modernized Demolition Initiators

(MDI): MDI represents the military application of commercial shock tube technology to detonate explosives. MDI will be the primary system used to prime and detonate military explosives. It offers increased safety and simplicity compared with current systems. Conventional blasting caps and detonating cord will be retained for special applications not suited for MDI. Will begin procurement and fielding in FY95. (POC: Mr. Morison, DSN 680-2285/ email Morisona@ emh10. mon-roe.army.mil)

Deployable Universal Combat

Earthmover (DEUCE): A combat support dozer that will be fielded to combat engineers in the Light Infantry and Airborne units and will displace these units; M9 Armored Combat Earthmover (ACE), D5B, D7F, D7G dozers and associated prime movers with trailers. DEUCE will be fielded in August 1997. (POC: Mr. Morison, DSN 680-2285,/ e-mail Morisona@ emh10.monroe. army.mil)

Selectable Lightweight Attack

Munition (SLAM): A lightweight, multipurpose munition which can be used as a magnetically fused mine, a tripline activated off-route mine, a timed demolition charge or as a command detonated device. When used as a mine, it has a self destruct function. Will be procured in limited quantities for light forces in FY96. (POC: Mr. Morison, DSN 680-2285/ e-mail Morisona@ emh10.monroe.army.mil)

Patriot Advanced Capability - 3

(PAC-3): Patriot is a high/medium advanced surface-to-air guided missile air defense system. PAC-3 is a major upgrade to the Patriot system, consisting of integrated, complementary improvements that will be implemented by a series of phased, incrementally fielded materiel changes beginning in FY96. PAC-3 will increase battlespace and lethality by enhancing current detection and engagement capabilities. The PAC-3 missile (ERINT) is a key component of the overall improvements to the Patriot system. It will provide essential increases in battlespace,

accuracy, and kill potential against TBMs. Total PAC-3 capability projected to be completed by end of FY98. (POC: Mr. Woolever, DSN 680-2932/ e-mail Woolver2@emh10.monroe.army.mil)

M1A2: Deliveries of the M1A2 upgrade tank system for the U.S. Army began in the fall of 1994 and are scheduled to continue through the turn of the century with a production of 1079 tanks FUE is scheduled for 1CD 1QFY96. By year 2005, the technology used to develop and build the M1A2 will be nearly 20 years old. The armor community is developing a campaign plan for modernizing the tank force for the foreseeable future. POC: MAJ George Conrad, DSN 680-4083/ e-mail Conradg@emh10.monroe.army.mil)

Up-Armored HMMWV: Vehicle will be produced in a Scout, MP, and an Air Force variant. System possesses increased ballistic protection against small arms fire, artillery airburst, small anti-personnel mines and unexploded artillery submunitions for the crew compartment. FUE FY96. (POC: MAJ Stevens DSN 680-3124/ e-mail Stevens1@emh10.monroe.army.mil)

Armored Gun System (AGS): The AGS is an lightweight mobile gun system that will provide direct fire support for the light forces where tanks are not available. The AGS will be air deployable, Low Velocity Airdrop (LVAD), more lethal, survivable, deployable, and supportable than the M551A1 it will be replacing. The AGS is a three man crew system with an 105MM light weight cannon autoloader with 21 ready rounds. The AGS will also have day, night thermal sight. FUE: 2QFY99 to 3-73rd Armor Battalion and the 2nd ACR(L). (POC: MAJ Stevens DSN 680-3124/ e-mail Stevens1@emh10.monroe.army.mil)

Long Range Advanced Scout

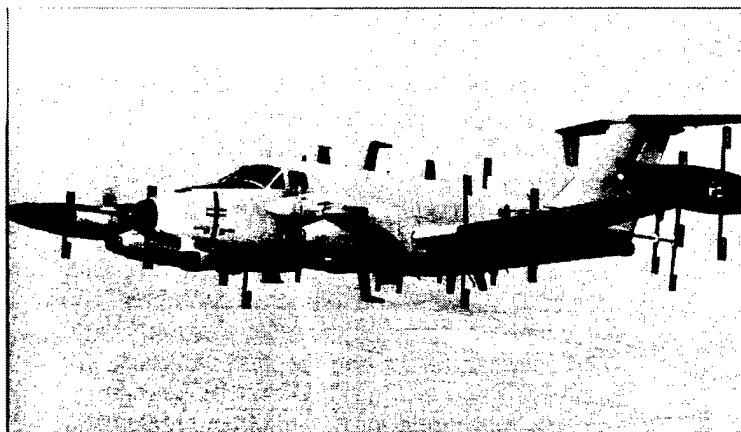
Surveillance System (LRAS3): The LRAS3 system will provide the Maneuver Commander's timely, accurate 2nd GEN FLIR technology battlefield information from his Battalion Scout Platoons. The LRAS3 is a Scout 2nd GEN FLIR target acquisition system that will provide day, night, all weather target acquisition that will allow the Scouts to identify and acquire enemy targets outside the enemies

engagement ranges. LRAS3 is a 2nd GEN FLIR technology with Laser Rangefinder (LRF), Daylight TV, Chemical Detection ability and has C3I Compatibility. FUE FY01.. (POC: MAJ Stevens DSN 680-3124/ e-mail Stevens1@emh10.monroe.army.mil)

Improved Target Acquisition System

(ITAS): ITAS is an upgrade to current Ground TOW and HMMWV TOW Target Acquisition and Fire Control Systems. ITAS improves Target Detection and Acquisition range, pathfinder for 2nd GEN FLIR technology and ITAS will allow for growth for the Follow-On to TOW (FOTT) Missile. ITAS is a 2nd GEN FLIR detector with monitor capability, eye safe laser range finder (LRF), direct view optics, embedded trainer, aided dual target tracking, automatic boresight, and increased range (Ph) capability. FUE: 4QFY97 (POC: MAJ Stevens DSN 680- 3124/ e-mail Stevens1@emh10.monroe.army.mil)

Guardrail Common Sensor (GRCS):



A corps/EAC airborne reconnaissance, intelligence, surveillance and target acquisition (RISTA) signals intelligence system. GRCS is capable of detecting, identifying, and accurately locating high payoff C4I targets and weapons systems from the FLOT to at least 300 kms forward of the FLOT or national boundary. Location accuracy's are within target location error (TLE) specifications for the Army tactical missile system (Army TACMS) and multiple launch rocket system (MLRS). Time critical reporting is accomplished via the Commanders' Tactical Terminal (CTT) to Army and Marine Corps ground commanders and Navy and Air Force C2 nodes. (POC: Mr.

Helderman, DSN 680-3273 e-mail Halderman@Emh10.Monroe.Army.Mil)

All Source Analysis System (ASAS):

A mobile, automated intelligence processing, fusion and dissemination system designed to provide timely, accurate and relevant all source intelligence and targeting support to battle commanders and staff (BN through EAC). ASAS Block I is now fielded to 12 high priority corps/divisions. ASAS-Extended is proven ASAS software on commercial hardware. Currently now fielded at I Corps, USFK, PACOM, 10th ID and CENTCOM. ASAS Block II software capability package one (CP 1) is expected to be delivered to 2AD in 1QFY96. (POC: CPT Harris, DSN 680-4269/ e-mail Harrisb@Emh10.Monroe.Army.Mil)

Commanders Tactical Terminal

(CTT): Provides dedicated communications for the rapid dissemination of perishable intelligence to aviation, artillery, air defense, and maneuver C2 and execution nodes and intelligence centers. Through the CTT, in-time reporting is also accomplished to Marine Corps, Navy, and Air Force C2I nodes (ashore/afloat/airborne). Timely reporting is generated by Army, Navy, and Air Force airborne RISTA systems (e.g., Army Guardrail Common Sensor, Air Force U2R, and Navy EP3), and national centers and systems. Perishable reporting is accomplished via UHF relays located on the airborne platforms through the Tactical Reconnaissance Intelligence exchange System (TRIXS) interactive network, and via satellite relay through the Tactical Information Broadcast Service (TIBS) interactive network. (POC: Mr. Helderman, DSN 680-3273/ e-mail Halderman@Emh10.Monroe.Army.Mil)

Integrated Meteorological System

(IMETS): A mobile tactical automated weather data receiving, processing, and dissemination system designed to provide timely weather and environmental effects forecasts, observations, and decision aid information to multiple command elements at echelons where USAF weather teams provide weather support to the Army. IMETS is an Army-furnished system (standard shelter/ vehicle, common hardware/software (CHS), and communications that will be operated by

USAF personnel and maintained within planned Army support for system components. Two systems were fielded to Korea in Mar 95. Two additional systems are planned to be fielded to FORSCOM units during 1QFY96. (POC: Ms. Hanks, DSN 680-4077/ e-mail Hanksj@Emh10.Monroe.Army.Mil)

Digital Topographic Support System/Quick Response Multicolor Printer (DTSS/QRMP):

Capable of receiving, (re) formatting, creating, storing, retrieving, updating, merging, and manipulating digital topographic data and hard copy reproduction of topographic products. DTSS/QRMP combines two separate systems into one downsized system. The system provides the theater commander and his staff automated and integrated terrain products to enhance and compress the decision making process across the operational continuum. The fielding scheduled calls for first unit equipped (FUE) in FY98. The Project Director is attempting to get the prototype to the field in FY97. (POC: Ms. Hanks, DSN 680-4077/ e-mail Hanksj@Emh10.Monroe.Army.Mil)

"Hunter" Joint Tactical Unmanned

Aerial Vehicle (JT-UAV): Capabilities include: 250kms+ range, 8-hour mission time, and forward looking infrared radar/televised (FLIR/TV) real time imagery. Future payloads include communications/data relay, moving target indicator (MTI) radar, and minefield detection. Hunter is the first of a family of UAVs which include Endurance UAV at JTF/EAC and Close Range "Maneuver" UAV at maneuver brigade and LID. The first of 24 Army bound Hunter UAV RISTA systems for Corps, Division (except LID), and ACRs began flight operations at Ft Hood TX in the 15th AEB, III Corps on 18 Aug 95. (POC: Mr. Undercoffer, DSN 680-3274/ e-mail Undercoj@Emh10.Monroe.Army.Mil)

TROJAN Special Purpose Integrated Remote Intelligence Terminal

(SPIRIT) II: A HMMWV mounted intelligence dissemination satellite communications system which provides access to national and other level intelligence data bases. TROJAN SPIRIT II provides all-source dissemination capabilities, including secure voice, data and fax. It receives, displays, and transmits digital

imagery, weather and terrain products, templates, graphics and text between CONUS/OCONUS bases and deployed forces. It supports force projection and split-based operations. Will be fielded in FY 96. USMC currently has several systems fielded. (POC: Mr. Hurst, DSN: 680-4347/ e-mail Hurstj@Emh10.Monroe.Army.Mil)

TROJAN Transportable Mini Switch

(TTMS): A preplanned product improvement of the TROJAN SPIRIT II system. It provides a material solution to eliminate a single source of failure at the Fort Belvoir Switching Center. TTMS will further eliminate dual satellite hops and provide TROJAN SPIRIT II connectivity for an intra- and inter-theater digital voice switching capability. TTMS is employed at theater level and handles up to 12 TROJAN SPIRIT IIs. The system has been fielded in I Corps. (POC: Mr. Hurst, DSN: 680-4347/ e-mail Hurstj@Emh10.Monroe.Army.Mil)

Joint Surveillance Target Attack

Radar System (Joint STARS): A joint Army and Air Force program consisting of an Air Force E-8C aircraft and Army ground station modules (GSMs). The E8C uses a multi-mode radar, MTI and SAR, to collect data on moving and stationary ground vehicles, slow moving rotary and fixed wing aircraft, and rotating antennas. The GSM receives and analyzes processed radar imagery from the E8C. The system supports situation development, intelligence and targeting functions with near real time interactive displays. The multi-service operational test and evaluation (MOT&E) is scheduled to begin in Nov 95. The first production aircraft is scheduled to be delivered 2QFY96 with initial operational capability (IOC) 2QFY97. (POC: MAJ McNeill, DSN: 680-3443 / e-mail Mcneillw@Emh10.Monroe.Army.Mil)

Ground Based Common Sensor-

Light/Heavy (GBCS-L/H): A next generation divisional system to intercept, locate and process raw signal data in support of intelligence collection, targeting, and electronic attack. The GBCS provides target detection, identification and location reports in near real time to brigade and division commanders. GBCS can also jam enemy tactical communication emitters. It is capable

of passing targeting data to TACFIRE in support of a 'quickfire' or sensor-to-shooter link. GBCS-L supports light divisions/brigades and GBCS-H supports heavy divisions/brigades. The range capability of the GBCS-L/H can be extended by the use of the aerial system known as Advanced QUICKFIX (AQF). AQF, in conjunction with GBCS, provides highly accurate location data via its precision location subsystem. All the components of these three systems are the same with the exception of the vehicle and antennas. FUE is scheduled for FY96. (POC: Mr. Floyd, DSN: 680-3667 / e-mail Floydw@Emh10.Monroe.Army.Mil)

Digitization: The application of information technologies to acquire, exchange, and employ digital information throughout the battlespace. Leverages digital technology and moves digital data between combat platforms by adding seamless connectivity from the foxhole to the NCA. Digitization operationally enhances the situational awareness and force synchronization on the battlefield, while enhancing target acquisition and revolutionizing direct and indirect fire roles. Army objective to digitize a brigade in FY97. (POC: Mr. Poynter, DSN 680-3874) e-mail Poynter@Emh10.Monroe.Army.Mil)

Global Positioning System (GPS):

Space-based POS/NAV system provides accurate three-dimensional position, velocity and time information. Fielding of precision location GPS receivers (PLGR) is ongoing. FOC 3QFY97. (POC: Mr. Gassaway, DSN 680- 5858) e-mail Gasaway@Emh10.Monroe.Army.Mil)

Enhanced Position Location

Reporting System (EPLRS): A low-to-medium speed data transmission device with a position navigation capability. EPLRS supports the Army Tactical Command and Control System concept by providing the data communications connectivity between battlefield functional area automated systems. EPLRS fielding started 2QFY95 to 1st CAV DIV and will be fielded to 1st CAV, 24th ID, and TFXI NLT 4QFY96. "An additional buy of 2107 EPLRS was approved by the Army Acquisition Executive to field the remainder of FP1 by FY99." (POC: Mr. Gassaway, DSN

680-5858) e-mail Gassaway@Emh10. Monroe. Army.Mil)

Command and Control Vehicle

(C2V): Objective of the program is to develop a vehicle that facilitates coordination and execution of the battle on-the-move. Mission Module permits mobile operations, functionally similar to stationary operations. Commanders and staffs remain mounted, supported by a robust intercom, data distribution, and communications system. Program successfully passed through ASARC I/II decision December 1994. Currently, program is in Engineering and Manufacturing development phase. Low Rate Initial Production (LRIP) is scheduled for 4QFY96. (POC: CPT Richards, DSN 680-289) e-mail Richards@ emh10.monroe.army.mil)

Army PREPO Afloat - Army War

Reserve - Three: The Army War Reserve Three (AWR-3) includes sustainment supplies and equipment for a contingency corps, a humanitarian effort, a combat brigade, and a port opening capability. Supplies include all classes needed to sustain deployed contingency corps units up to C+30. Humanitarian support and port opening ships provide watercraft, trucks, forklifts, cranes, container handlers, food, and shelter items. Combat brigade ships have equipment and 15 days of sustainment supplies for 2 mechanized and 2 armor battalions. The Combat Brigade Afloat is on station and ready for deployment. (POC - Mr. Sova, DSN 680-3005, e-mail SOVAJ@emh10.monroe.Army.Mil)

Family of Medium Tactical Vehicles

(FMTV): FMTV is a family of medium trucks sharing common design and components with two payload classes: 2-1/2 tons and 5 tons. FMTV will provide ground transport for personnel, cargo and weapon systems, while reducing operations and support costs for the medium truck fleet. FUE is scheduled for Dec 95 to selected units of the 82nd Airborne Division. (POC - Mr. Clapp, DSN 680-2609, e-mail CLAPPT@emh10.monroe.army.mil)

Improved Fox -- NBC Reconnaissance System (NBCRS):

The NBCRS, M93A1 is an armored reconnaissance vehicle equipped to detect, sample, identify, mark, and

report the presence of NBC hazards. NBCRS will rapidly and accurately determine extent and nature of NBC contamination hazard over a specified area with expeditious transmission of information to supported units. Planned improvements will allow for digital communication to disseminate critical information to supported units via the Maneuver Control System (MCS). First Unit Equipped (FUE) is FY98 to Force Package 1 units. (POC - CPT Franks, DSN 680-4412, e-mail FRANKSC@emh10.monroe.army.mil)

UH-60Q MEDEVAC Helicopter: The UH-60Q will provide improved medical, navigational and communication capabilities over the currently employed MEDEVAC (UH-1/UH-60A) aircraft. The Office of the Surgeon General approved the ARNG transfer of \$17M to Utility Helicopter Program Managers Office (UH-PMO) for execution of UH-60Q Phase II (IOT&E) program on 27 Jun 95. PM anticipates type classification in Dec 97. (POC MAJ Courmoyer, DSN 680-3158, and e-mail COURNOYR-emh10.monroe.army.mil.)

Aircraft Nondestructive Test

Equipment (NDTE): NDTE will provide Army Aviation Maintenance with state-of-the-art commercial equipment capable of inspecting aircraft components and structures for materiel defects/damage without aircraft disassembly. NDTE will greatly simplify inspection procedures, reduce time required to perform inspections and also be capable of inspecting composite materials found on modern Army aircraft. The NDTE program includes Eddy current, Ultrasonic, Harmonic Bond, and X-Ray test equipment. All divisional and non-divisional AVIM units (FP 1-4) will receive NDTE systems. Aviation Powertrain Repairman (MOS 68D) with an Additional Skill Identifier (ASI) of N2 are the designated operators of the NDTE equipment. Initially a nine week resident training course conducted by the U.S. Air Force at their training facilities will train selected 68D personnel. The N2 ASI will be awarded to those 68D's who successfully complete the course. Fielding to Force Package 1 units will begin in Sep 96. Army wide NDTE fielding should be completed by Sep 97. (POC - Mr. Holm, DSN 680-2184, e-mail HOLMS@emh10.monroe.army.mil)

Integrated Family of Test Equipment (IFTE) Base Shop Test Facility

(BSTF): The IFTE BSTF is Automatic Test Equipment (ATE) used at the Direct Support and General Support levels of maintenance, to test and isolate faults in weapon system line replaceable units (LRU) and shop replaceable units (SRU). It is designed for state-of-the-art testing of digital, hybrid, and RF electronics, including spread spectrum technology. The station is either housed in a standard Army S-280 shelter, forming the BSTF, or floor mounted in a free standing version. The BSTF is transportable by a 5 Ton truck. Initial FUE was FY92, with continuous fieldings through FY02. The BSTF is currently planned to support ASAS, AVENGER, DGM, DRAGON/TOW, GBS, HAWK, KIOWA WARRIOR, MLRS, NBC-FOX, PALADIN, TTC/TTY-39, AN/VRC-12, and BRADLEY TOW II. (POC - Mr. Marsico, DSN 680-3155, e-mail MARSICOW@emh10.monroe.army.mil)

Biological Integrated Detector

System (BIDS): The BIDS will quickly and reliably detect and identify the presence of biological warfare agents. The BIDS is a detector suite contained in a shelter mounted on a heavy HMMWV and includes a trailer mounted generator. BIDS will incorporate existing long-range secure voice communications and data transmission systems to rapidly report vital information to mitigate large-area BW effects. System improvements are planned for the FY99/FY03 timeframe which will make the BIDS more effective. The system is UH-60, CH-47D, and C-130 deployable. There will be one active BIDS platoon and one USAR company fielded with 7 systems by Jun 96. (POC - CPT Franks, DSN 80-4412, e-mail FRANKSC@emh10.monroe.army.mil)

Remote Sensing Chemical Agent

Alarm (RSCAAL): The RSCAAL is a remote sensing chemical agent alarm that detects nerve and blister agent clouds at distances up to 5 KM. This system is passive infrared sensor with an onboard microprocessor. It uses line-of-sight and scans along a 60 degree arc from the detector. RSCAAL components consist of detector, retractable tripod, transit case, vehicle mount, and

standard military power source. The basis of issue is one per NBC Reconnaissance Team and fielding will begin in late 95. (POC CPT Franks, DSN 680-4412, e-mail address: FRANKSC@emh10.monroe.army.mil)

Combat Service Support Control System (CSSCS):

Provides the logistics commander and staff the ability to rapidly collect, analyze, and disseminate critical logistics, medical, financial and personnel information. CSSCS will provide timely situational awareness and force projection information to determine the capability to support current operations and sustain future operations. Fielding begins in Nov 97 to III Corps COSCOM and then to other III Corps units. (POC - Mr. Van Alstine, DSN 680-3019, e-mail VANALSTP@emh10.monroe.army.mil)

Corps and Theater ADP Service

Center-Phase II (CTASC-II): Provides the commander with the capability of mobility and interoperability of split-based logistical operations to sustain an operation. Provides increased ADP capability to rapidly and efficiently satisfy wartime information requirements, provides greater survivability through mobility and standardization of hardware and software systems. Fielding to XVIII Corps COSCOM began in Nov 95 and fielding will continue throughout the Army. (POC - Mr. Van Alstine, DSN 680-3019, e-mail VANALSTP@emh10.monroe.army.mil)

Combat Service Support Automated Information Systems Interface

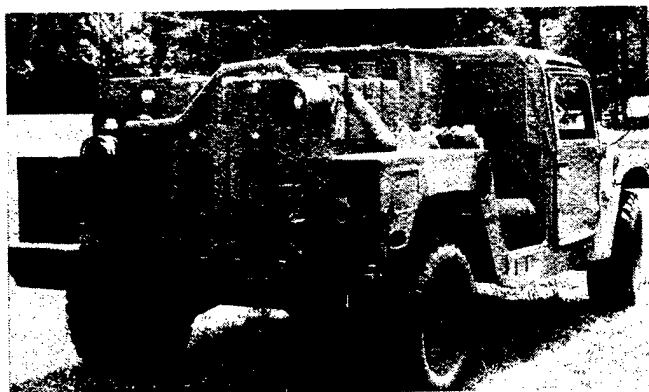
(CAISI): Fills a current shortfall by providing a capability for the STAMIS to be packet capable. CAISI is a user-owned and operated capability that allows CSS automation devices to exchange information via tactical and commercial communications networks to include automation systems within the sustaining base. CAISI connects existing incompatible devices to networks. Fielding to XVIII Corps COSCOM will begin in Mar 96 and fielding will continue throughout the Army. (POC - Mr. Van Alstine, DSN 680-3019, e-mail VANALSTP@emh10.monroe.army.mil)

Automatic Chemical Agent Detector

Alarm (ACADA): The ACADA is an automatic point detector (scheduled to replace the M8A1) that will detect both nerve and blister agents. The system will weigh less than 15 pounds and be 0.5 cubic feet or smaller in size. The new system will have the added blister capability improvement over the M8A1 as well as a decrease in the number of false alarms. The basis of issue for the ACADA is one for one replacement for the M8A1 and is currently funded for Force Package 1 and 2 units. Fielding is currently scheduled for 1QFY97. (POC CPT Franks, DSN 680-4412, e-mail FRANKSC@ emh10.monroe.army.mil)

AN/UDR-13 Pocket Radiac: The Pocket Radiac is a radiation dosimeter that measures initial and residual gamma radiation and prompt neutron radiation. The system will automatically alert the operator when safe radiation dose is exceeded. The system improves on the IM-93 in that it measures both prompt and residual gamma and neutron radiation doses and also measures dose rate that previously required a different detector (IM-174/AN-VDR-2). The system will replace the IM-93 with a Basis of Issue of one per platoon. System is currently scheduled for fielding in Feb 98. (POC CPT Franks, DSN 680-4412, e-mail FRANKSC@ emh10.monroe.army.mil)

XM56 and XM58 Smoke Generation Systems:



The XM56 and XM58 are large area, mobile smoke generator systems which produce visual or infrared smoke. Future improvements will

include millimeter wave (MMW) obscurant capability. The smoke generator is modular in construction including a power module, visual module, IR module, and future MMW module. The power module uses a gas turbine to disseminate obscurants. The XM56 is HMMWV mounted and the XM58 is mounted in a M113 tracked vehicle. The system requires only two fuels, vehicle/ turbine fuel and fog oil.

These systems will be fielded to Force Package 1 units beginning in May 97. (POC - Mr. Dixon, DSN 680-4413, e-mail - DIXONW@ emh10.monroe.army.mil)

Enhanced Tactical Radar Correlator

(ETRAC): A tactical mobile ground processor (normally at Corps) for receiving advanced synthetic aperture radar systems (ASARS) data received from U2R via a direct data downlink. ETRAC's major function is to provide ASARS imagery to Modernized Imagery Exploitation System (MIES) for exploitation, situation and target development.

It is C-130 self-deployable. XVIII Airborne Corps received the first ETRAC in May 1995. The second system is slated for V Corps in FY96. (POC: Mr. Waller, DSN 680-3441/e-mail WALLERJ@ emh10.monroe.army.mil)

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SOLDIER



The Army's most valuable resource is the Soldier. Regardless of how superior our leadership, weapons, and technologies might be, it is the soldier who is the backbone of the Army. We are providing a comprehensive program to modernize the soldier as a battlefield system and to maximize warfighting capabilities by enhancing lethality, command and control

SOLDIER ENHANCEMENT PROGRAM FORCE PROVIDER

Enhanced Land Warrior (ELW): The total Army program for modernizing the soldier as a system. It includes all soldiers and provides for acquisition of all items worn, carried or consumed by soldiers for individual use in a tactical environment. The ultimate result of ELW will be greatly enhanced combat capabilities, as well as full integration of the soldier into the digitized battlefield. ELW will produce three major variants of an integrated fighting system: Land Warrior for dismounted soldiers, Air Warrior for air crewmen, and Mounted Warrior for armored vehicle crewmen. The dismounted system includes a modular weapon with thermal sight, improved ballistic protection, a soldier computer/radio, combat ID and other capabilities. Initial fielding of the dismounted Land Warrior System is programmed to begin in FY00. (POC: Mr Stefaniw, DSN 680-3117, e-mail Stefaniw@ emh10.monroe.army.mil)

Soldier Enhancement Program (SEP): A quick reaction program initiated by Congress in

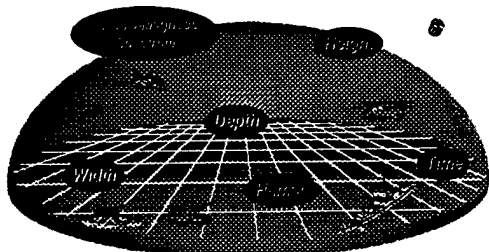
1990 to expedite modernization of infantry soldier equipment. The program has since been expanded to include all soldiers, and to address quality of life issues in the field. The focus is on nondevelopmental solutions which can be ready for procurement in 36 months or less. By the end of 1994, 148 projects were initiated and 41 completed. Eight new starts are programmed for FY96, including the XM2 Selectable Light Weight Attack Munition and the 40mm Grenade, Less than Lethal. The program includes small arms, optics, munitions, clothing and individual equipment, and individual combat rations. (POC: CPT Germain, DSN 680-2633, e-mail Germainj@ emh10.monroe.army.mil)

Force Provider (FP): Transportable complex of kitchens, showers, laundries, billets, latrines and morale support items. Designed to improve a soldier's quality of life in the field, FP also supports OOTW. One module can support approximately 550 soldiers/personnel, while six modules configured together can support a brigade sized element. One module is currently providing support at Guantanamo Bay; two interim support packages (ISP), each capable of supporting a brigade-sized element, also exist. One is prepositioned afloat in the Pacific and the other is located at Sierra Army Depot. (POC: CPT Hamilton, DSN 680-3039, e-mail Hamiltona@ emh10.monroe.army.mil)

BATTLE LABS

Characteristics of Decisive Operations

Multi-Dimensional. Force XXI will operate in an expanded battlespace. This battlespace goes beyond the traditional physical dimensions of width, depth and height; to include portions of the electro-magnetic spectrum that extend beyond the physical boundaries of the division through its communications and digital connectivity to other Army, Joint and Coalition elements, reaching back even to CONUS from the Theater of Operations. Battlespace will also be defined by the human dimension, including not only soldiers and leaders, but also the civilian population in which operations are being conducted, citizens and families in the United States, and the peoples of the world. Finally, time is a dimension of battlespace that must be mastered. This concept seeks to seize and exploit the initiative to set tempo of the battle, not just acting faster than the enemy, but acting at that speed which is best for execution of the friendly plan.



Battlespace generally be framed by METT-T and largely shaped by corps or JTF. This shaping includes not only the application of fires and combat power, but also Deception, PSYOPS, Civil Affairs, Host nation Support, Sustainment, Intelligence, and reinforcement of existing terrain and infrastructure.

Precise. Decisive Operations are characterized by precision in operations. Precise operations are enabled by three emerging capabilities. First digitization, providing soldiers and leaders at each echelon the information required for making informed decisions. Second, a full suite of strategic, operational, and tactical sensors, linked to analytical teams that fuze combat information into situational awareness across the

battlespace with greater clarity than ever before. Finally, simulations enable Army elements to be tailored based on emerging situation/crisis, plan operations based on METT-T, wargame and rehearse those operations yielding precision in execution.

Precision in operations goes beyond precision strike, including every aspect of military operations from deployment through combat and redeployment or transition to other operations. In force projection this means the right force, effectively trained and rehearsed, to the right place on time. In combat operations, precision means precise maneuver, positioning elements correctly in time and space, complemented by precision systems and precision munitions. Precision in force protection includes employing dynamic obstacles exactly in time and space creating either protective or shaping effects, employing air/missile defenses effectively and countering each enemy capability based on intelligence at each echelon. Precision in sustainment is proactive arming, fueling, fixing, and manning empowered by common situational awareness of requirements and asset availability.

Non-Linear. Decisive operations are characterized by non-linearity, executing tasks across the entire battlespace rather than massing combat power at the Forward Line of Troops (FLOT). Non-linear operations do not seek a rigid organization of the battlespace into close, deep, and rear operations. Instead, the battlespace is fluid, changing as METT-T changes through the duration of mission preparation and execution. Peacetime engagement, humanitarian assistance, and peacekeeping missions are generally executed non-linearly, conforming to the physical characteristics or infrastructure of the area of operations or based on mission requirements. Non-linearity is enabled by greater situational awareness, allowing risk to be accepted with space between units rather than more traditional contiguous operations. Non-linearity also increases the burden on each divisional element, maneuver, CS and CSS for all-around security.

Distributed Operations. Employing our emerging capabilities, operations and functions are executed throughout the depth, width and height of our battlespace. These operations are distributed, that is executed where and when required to achieve decisive

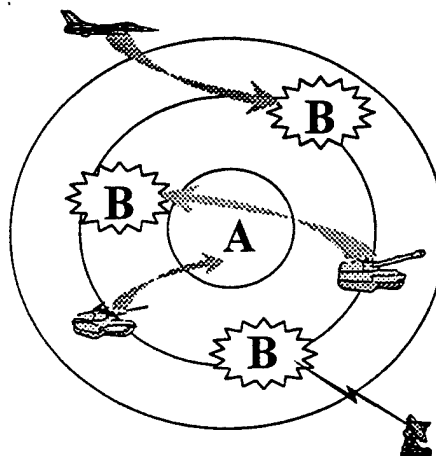
effects vice concentrated at a possibly decisive point. Key to distributed operations is the empowerment of soldiers and leaders to use their initiative, willpower, and professional expertise to carry out critical tasks at all echelons.

There are significant advantages to conducting distributed operations, both in war and other military operations. Distribution enables Army elements to take advantage of internetted communications avoiding the tendency to use the chain of command as the chain of information. Dispersion empowers subordinates to operate independently within the commander's intent, leading to synergistic effects that exceed synchronization by a centralized headquarters. Distributed operations lead to agility, with greater flexibility to react to multiple changes in the situation. Centralized operations tend to be more sequential in nature. In contrast, distributed operations can execute numerous integrated tasks simultaneously across the battlespace. There are certain functions that are best executed centrally, primarily management of resources. Force XXI Operations seek to execute each function using the best operational scheme. Through experimentation and operational experience, it appears the best approach is: Develop a central intent and concept; Conduct parallel planning and coordination enabled by digitization; and Execute distributed operations to achieve the objective.

Non-Linearity. Multi-dimensional and distributed approaches to operations enable non-linearity. Since the advent of Airland Battle in 1982, we have sought to break from a rigid win or lose at the front line mentality. This, coupled with smaller armies across the world guaranteed that future operations will be non-linear. Additionally, aviation and military operations at the lower end of the spectrum have never been bounded by artificially created graphical control measures. With Force XXI we continue the trend away from linear to a concept that seeks to develop forces that are comfortable and effective operating with open flanks and a 360° operations. These forces will be more agile and flexible, better adapted to combat in a wide variety of scenarios.

Simultaneity. The concept of operations that is multi-dimensional, precise,

distributed, and non-linear yields the capability to conduct simultaneous operations across the battlespace. Simultaneous operations seize the initiative and present the enemy leadership with multiple crisis, but no effective response. Digitization creates the ability to plan, coordinate, and execute actions simultaneously. Each of these actions creates an effect, the sum of which is greater than if they were discrete and sequential. Rather than a single



concentrated attack, we execute a series of attacks (lethal and non-lethal) as near-simultaneously as possible. Simultaneous attacks are followed by a rapid transition to exploitation, leading to decisive victory with fewer casualties.

Integrated. Force XXI Operations are fully integrated with Joint, Multi-national, and Non-governmental partners. Recent experience has reminded us that Army operations have never been and will never be independent. From initial receipt of mission, through deployment, operations, and transition to follow-on operations Army elements function as an integral part of a Joint Task Force. That Joint Task Force is linked to Coalition partners and usually operates in conjunction with one or more non-governmental agencies such as the International Red Cross, United Nations, etc. Integrated operations enable the Army to leverage the full suite of capabilities the services bring to the battlespace. Army helicopters operating from carriers during Operation RESTORE DEMOCRACY and TMD warnings from SPACECOM are two examples of fully integrated operations.

Warrior Focus

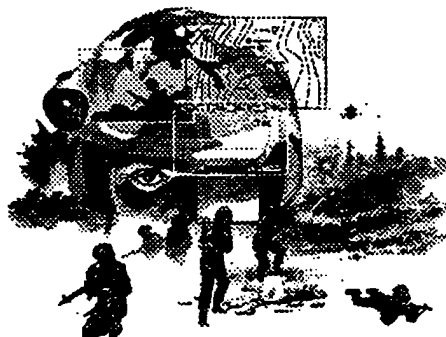
During the fall of 1995 the Army conducted the Warrior Focus AWE: the primary purpose of which was to determine the implications of Digitization and Own the Night technologies for the Dismounted force. Warrior Focus AWE was conducted by the Dismounted Battlespace Battle Lab, employing a Brigade Combat team from the 10th Mountain Division as well as Special Operations Forces. The experiment included constructive and live simulations and training at Fort Drum New York and culminated with Rotation 96-02 at the Joint Readiness Training Center. Key to the experiment was interoperability between dismounted and mounted forces. Inclusion of a digitized, mounted team from the EXFOR supported interoperability experimentation. Deliverables from Warrior Focus AWE are outlined below:

- Contributions of Digital and Own the Night Technologies to Information Requirements
- Confirm or Deny Adequacy of Information Architecture
- Digital Doctrine and TTP for the Dismounted Force.
- Tactical Impacts of Digital and Own the Night Capabilities

Using the opportunities available at both Ft Drum and the JRTC, the AWE examined operations across a range from low to mid intensity conflict. At the same time a variety of terrain and weather conditions were experienced from hot summer mountain and urban terrain operations at Ft Drum in August 1995 to cool, rainy pine forest operations at Ft Polk in November. These variations in conditions provide greater clarity and confidence in the conclusions of the experiment.

The digitization aspects of Warrior Focus complement the mounted Focused Dispatch AWE, ensuring that we build a coherent, interoperable digitized force. In Warrior Focus digital applications centered on Tactical Operations Centers at Brigade and Battalion levels, as well as digitization of maneuver, combat support, and combat service support elements down to company level. These capabilities, coupled with national to tactical level sensors, provided

situational awareness across the dismounted force.



The Own the Night aspects of the AWE built on earlier experimentation conducted by the Dismounted Battle Lab and the 101st Air Assault Division. While providing technological enhancements to the soldiers, approaches included innovative training techniques in night operations. Technology insertions were provided primarily to individual soldiers and leaders, including high power night observation sights and target designation capabilities.

While post-exercise analysis is ongoing and the final report from the AWE will not be complete until the Spring of 1996, there are a number of significant observations from Warrior Focus:

- Digital capabilities lead to more effective battlefield integration of mission planning, preparation and execution, particularly in planning where timeliness and accuracy was improved.
- Greater Situational Awareness led to significant improvements in mission execution.
- The combination of digital and Own the Night capabilities enhanced unit control and led to more effective target engagement at night.
- Digitization enhanced lethality, particularly through timely deconfliction of fires and enemy locations.

Own the Night technologies are a proven winner in both low and mid intensity conflict and should be invested in immediately, providing significant operational and force protection improvements across the force.

Prairie Warrior 95

The annual Prairie Warrior AWE (PW 95) held in May of 1995 provided the Army the opportunity to nest several experiments within the capstone learning experience for the students of the Command and General Staff College (CGSC). Prairie Warrior enables the Army to experiment with the Joint and Corps-level activities in support of the Army's Title 10 responsibilities. It is an experiment in the education of our future leaders in the concepts and application of Force XXI operations. Battle Command experimentation extends our understanding of the impact of digitization on the art and science of command. Taken together, these experiments make PW 95 one of the key and most powerful of our AWEs.

The central experiment within PW 95 is the Mobile Strike Force (MSF). The MSF uses a division-size force, equipped with 2010 technologies, to examine the DTLOMS implications of future warfighting. MSF is not just innovative technologies, but also innovative concepts that explore precision operations. Not just precision fires, but a fires and maneuver combination enabled by digitization. Conducted entirely in simulation, and staffed by specially trained CGSOC majors, the MSF enables assessment of the following:

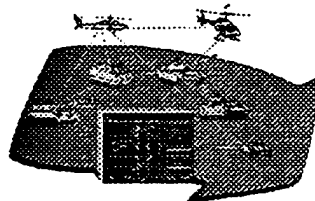
- Force XXI Design Principles
- Force XXI Operational Concepts
- Battle Command Capabilities
- CSS Concepts

CGSOC conducted a Battle Command Elective leading to PW 95 that served two purposes. First, it trained the student staff of the MSF in the operational concepts and the technical aspects of the hardware and software battle command technologies they would employ in fighting a futuristic force. Second, the elective itself was an experiment with innovative organizations and procedures in battle command. Rather than the traditional Main, Tactical and Rear Command Posts, the MSF organized with two small, mobile Plans and Operations Teams and a larger Knowledge Processing Team. The suite of Army and Joint simulations used in PW 95 enabled this experimentation on multiple levels. MSF organized with two small, mobile Plans and Operations Teams and a larger Knowledge Processing Team. PW used a confederation of

Army and Joint simulation models to experiment on multiple levels within a JTF and Corps scenario.

PW 95 provided Force XXI insights at nearly every Army echelon, from theater to battalion. At echelons above corps (EAC) PW 95 examined concepts for the Joint Force Land Component Commander (JFLCC). The *JFLCC organization and responsibilities were found to be "About Right."* As a theater-wide experiment, PW 95 determined that the *Theater Support Command was a useful concept* and worthy of further experimentation. Additionally, the *Army Service Support Command fit well into the theater organization.*

MSF insights on warfighting are major input to emerging operational concepts. Key to the MSF concept was *simultaneous precision fires across the entire enemy forces, followed immediately by maneuver exploitation to rapidly defeat the enemy force.* Results of MSF analytics indicate significant destruction of enemy forces with only minimal friendly losses. A key insight was that *all brigade-level*



organizations (Maneuver, DIVARTY, Aviation and DISCOM) became combined arms teams in the fullest sense of the term executing combat, combat support (CS), and combat service support (CSS) operations simultaneously and continuously.

Battle Command analytics indicate further experimentation is required with the Digital Battle Staff. This experimentation will take place in PW 96 using the EXFOR. *The concept of a Paperless TOC, using only screen displays, was discarded as impractical in the near term.* Large screen displays, robust sensor suites, and continuous VTC capabilities were validated as critical investments. Significant leader development insights were gained from the MSF. More combined arms CS and CSS operations require multi-functional literacy in staffs, while digitization requires significant improvements in technical literacy among all officers.



Further experimentation is required for several initiatives. Automated planning and rehearsal tools were found invaluable, but need technological maturity. The battlefield distribution and related logistics concepts require more experimentation to prove the concepts. Prairie Warrior 96 will be a significant experiment in the evolution of these critical Army capabilities, progressing to the Division AWE in 1997 and eventually a fully capable Force XXI.

Theater Missile Defense

In the Spring of 1995 the Army, in conjunction with the other services, conducted a AWE to examine Theater Missile Defense.

The AWE started with a Theater Missile Defense oriented study that concluded existing operational elements were stovepiped, and that primary areas of concern were C4I and passive defense. Potential solutions identified were automation, improved warning, and reduced sensor to shooter timelines. It was decided that deliverables from the AWE would include an Army TMD Concept, TMD Handbook, and an Integrated TMD Assessment. The study included a comprehensive world-wide threat assessment that revealed that the Detection and Identification process was critical and that "revenge shots," i.e., reactive engagement after the enemy has already fired are ineffective due to short dwell times of most TELs.

TMD consists of four operating elements: Attack Operations, Active defense, Passive defense, and C4I. The basic hypothesis of the TMD AWE was that if these four operating elements could be integrated across national, joint and Army capabilities then significant enhancements to force survivability would be achieved. This hypothesis was examined in an experiment that employed live, virtual and constructive using a variety of tactical scenarios. The TMD AWE was incorporated in a nested set of Joint and Army exercises, including:
ROVING SANDS - USACOM sponsored, FORSCOM directed, Integrated JCS Air Defense Live Exercise
JOINT PROJECT OPTIC COBRA - CINC Experiment Program focusing on Joint TMD Attack Operations

OPERATIONAL CONCEPT DEMONSTRATION - An air Force Experiment focusing on AF Attack Operations and C2I.

SPECIAL PROJECT NIGHT VECTOR - Navy Experiment Assessing Linkage of Joint and National Intelligence Programs

TMD AWE - Army experiment Integrating the Four pillars of TMD

The experiment was conducted in five phases: *Early Entry Operations, Defensive Operations, Transition, Decisive Operations, and Recovery*. In early entry sensor to shooter scenarios examined Army TMD's capabilities to execute the TMD fight, passing early warning to sister services, and executing TMD missions immediately upon arrival in theater. Defensive and Transition operations allowed experimentation with sensor to shooter linkages to include ground based sensors and joint/army C4I systems as well as significant exploration of synchronization nodes including the Deep Operations Coordination Cell (DOCC) and the Joint Tactical Ground Station (JTACS). Reactive scenarios incorporated Special operations Forces (SOF) and UAVs in target development for subsequent attack by Army Aviation or ATACMS. Throughout the nested exercises, significant efforts were made to integrate joint approaches to TMD including not only digital connectivity, but also tactics, techniques, procedures, organizations, and training.

Some significant innovations from the



TMD AWE include:

Cruise missile warning, passive defense warning techniques, deep operations coordination, and Force Projection TOCs. Warnings included cellular pager "beepers" to provide timely warning only to threatened personnel. Deep operations coordination focused on joint and Army automated sensor to shooter linkages from radars and UAVs to ATACMs, AEGIS and Army/Air Force air attack elements. Force Projection TOCs provided a

rapidly deployable capability to command and control the TMD immediately upon arrival in theater. Some significant observations from the TMD AWE are:

- * Force Protection of maneuver forces remains difficult against short-range ballistic missiles and UAVs.
- * Joint, Interoperable, Automated TMD C4I systems are critical.
- * Pre-emptive attack of enemy missile systems is key to force survivability.
- * Must continue to develop force warning, both for individuals and units.
- * Must develop Joint, Automated Target Nomination system.

TMD 95 AWE will be followed by experimentation in 1996 that continues to develop Joint and Army operational, organizational and materiel solutions to the challenges of Theater Missile Defense.

TRADOC Analysis Center (TRAC)

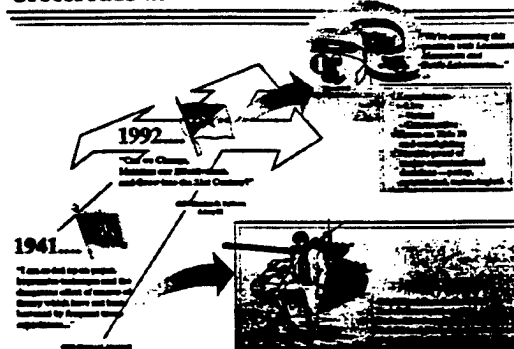


During the past quarter, TRAC's efforts have focused on support of Advanced Warfighting Experiments (AWE), Joint operations, COEA's and scenario development. As the Army analytic lead for the Joint Venture Task Force, TRAC is nearing completion of the analytical reports on Prairie Warrior/Mobile Strike Force 95, Theater Missile Defense (TMD), and Focused Dispatch AWE's. The analytic report on Warrior Focus should be completed in March of 96. TRAC is currently analyzing FXXI division and brigade design alternatives to inform the interim division design decision in December 95. To support the Joint community, TRAC provided model support for the Naval War College's GLOBAL 95 senior warfighter exercise, and fielded a Contingency

Analysis and Planning System (CAPS) to the EUCOM and CENTCOM staffs. TRAC is currently supporting over 15 COEA's. Work on the AH-64D Longbow, Joint Surveillance Target Attack Radar System (JSTARS), Advanced Field Artillery Tactical Data System (AFATDS) and TMD COEA's was recently completed. Work is also ongoing on a CENTCOM 1.0 theater resolution scenario, two SOUTHCOM scenarios, a high resolution mechanized attack in Northeast Asia, and a high resolution scenario depicting the relief of refugees.

LOUISIANA MANEUVERS

Crossroads ...



GEN Sullivan looked at the situation facing the Army of the 1990's and realized there was a parallel with the situation that faced GEN Marshall in 1941. The reality GEN Marshall faced then--

- Imminent entry into WWII.
- Large, untested Army.
- Growing resources.
- Difficulties with Congress, the Executive branch, and popular support.

Today's reality that GEN Reimer faces, while differing in detail, is just as wrenching--

- World's preeminent Army.
- New National Military Strategy
- Force Projection Army.
- Drawdown, declining resources.
- Ambiguous threat.

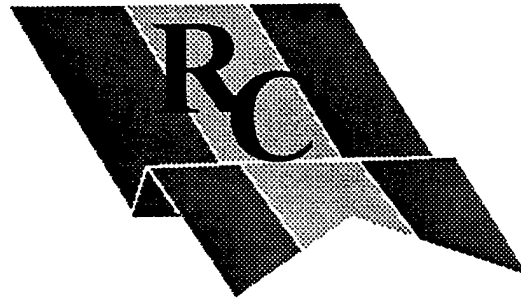
The tough challenge facing today's Army is meeting those realities while maintaining a strong and ready force. The Louisiana

The tough challenge facing today's Army is meeting those realities while maintaining a strong and ready force. The Louisiana Maneuvers (LAM) of the 1990's provides the catalyst and focus for the difficult changes the Army is undergoing. The Chief of Staff is the Director of LAM and the TRADOC Commander is the Deputy Director. The Army's senior leadership provides direct input into the new LAM through their membership in the Board of Directors (BoD), the governing body chaired by the CSA. By this mechanism, the major concerns of the senior leadership receive the necessary attention and action. Charged with managing the process, the LAM Task Force is the linchpin for the process, coordinating and synchronizing the efforts of the agencies investigating LAM issues. LAM is a process; a means to an end. Issues are approved by the BoD and proponents are assigned from MACOMs. Each proponent studies the assigned issue using available simulations:

- Live (CTCs, FTXs).
- Constructive (computer models).
- Virtual (SIMNET is prime example).

The LAM process also incorporates lessons learned from real world operations. Basing their findings and recommendations on solid empirical evidence, the proponents assemble decision packages for their issues for the BoD, to whom they present courses of action. The BoD recommends a decision for each issue to the Chief of Staff for his approval and order for implementation. With the advent of Force XXI, the CSA revised the scope for both the LAM process and the Task Force. Force XXI is geared toward the redesign of the operational force, the reengineering of the Title 10/TDA Army, and the programmatics of horizontal technical integration of the digitization of the Army. The LAM process is now primarily dedicated to the Force XXI vision, focusing the efforts on issues that will materially aid the move to Force XXI. The Task Force is the CSA's executive agent for Force XXI and is charged with managing the Departmental Force XXI synchronization and the BOD process to actually bring change into reality as the move is made to fully embrace information-age technology. (POC: Louisiana Maneuvers Task Force Initiatives Group, LTC Thomson, DSN 680-5327/ email Thomsonm@Emh10.Monroe.Army.Mil)

TRADOC REINVENTION CENTER



TRADOC received designation as a Reinvention Center (RC) on 14 August 1995 by Togo West, Secretary of the Army, thereby giving TRADOC more power to create the Army of the 21st century -- Force XXI. TRADOC is only the second Army agency to be designated a Reinvention Center; Forces Command (FORSCOM) received the designation last year. While FORSCOM's efforts are about reinvention of installations to build power projection platforms, TRADOC must answer the bigger question -- how do you reinvent the Army?

The TRADOC Commander, as Reinvention Center commander, designated four laboratories aligned with the functional areas of training, doctrine, combat developments, and mission support. The Reinvention Center Coordination Office (RCCO) functions as the command RC oversight and management office.

With RC designation the SECARMY has delegated to the TRADOC Commander specific authorities that allow him to side-step traditional barriers. In addition, these new authorities provide additional latitude and maneuver space for designated commanders to execute Strategic Plan 1995 goals. There are four authorities for executing actions under the RC umbrella.

Coordination Authority. Permission to deal directly with Office of Secretary of Defense (OSD) and other approved reinvention centers or laboratories without having to go through the DA staff first.

Regulatory Waiver Authority. Permission to waive DoD, DA, and TRADOC regulations, directives, instructions, and /or publications, with certain limitations.

Legislative Change Proposal Authority.

Permission to submit proposed legislative changes directly to the Office of Congressional Legislative Liaison (OCLL) without having to filter through the DA staff.

Lab and Prototype Authority.

Permission to designate TRADOC labs and prototypes, as needed, with no reporting requirements outside of TRADOC.

Detailed instructions are available for installations and HQ TRADOC staff to submit regulation waiver requests, reinvention initiatives, and legislative change proposals. An automated system is used to track the status of all requests. The RCCO, in coordination with OCLL, is developing FAST TRACK, a method to expedite legislative and statutory relief from the current 18 month timeframe to 90 days.

Malcolm Baldrige/Army Performance Improvement Criteria (APIC) will be used as the command performance indicator criteria to measure the quality service and success of reinvention efforts. Initial training has been completed by RCCO and lab personnel.

MISSION SUPPORT LAB. The Mission Support Lab has led the way in reinvention in TRADOC. The lab has developed an automated form for reinvention submissions and has rescinded 61% of TRADOC BASOPS publications and two AFAR provisions. They have formalized an agreement with the FORSCOM DCSPIM to pursue joint efforts in the BASOPS arena. They initiated BASOPS Opportunity Leveraging and Development (BOLD) Grants to provide venture capital for promising BASOPS investment opportunities without taxing limited reserves of TRADOC installations. The lab developed an automated tracking system utilizing Microsoft Access for status reports on waiver requests, initiatives, and legislative change proposals and will export this system to the RCCO and other labs for command-wide use.

TRAINING REINVENTION LAB. The Training Reinvention Laboratory's mission is to identify reinvention initiatives; and to seek revision of regulations and public laws that preclude more efficient and effective ways of using our resources to conduct and support Army training. Under the leadership of the Deputy Chief of Staff for Training at HQ TRADOC and

the Training Reinvention Laboratory Working Committee, it operates through a network of training POC's at HQ TRADOC and assigned schools and installations.

U.S. Army Cadet Command



With the end of summer, and the successful conclusion of the ROTC Basic and Advanced Camps, the full focus of the Command's attention once again turned to on-campus training and activities. Although the recruiting efforts of the Command were somewhat hampered by the constrained advertising budget, the fall enrollment campaign was successful. More than 33,300 young men and women were enrolled in the college-level Army ROTC program at the beginning of the new school year.

A major focus of attention this school year are activities commemorating the tenth anniversary of the establishment of the Command. Events marking this salient event in the history of the Army ROTC program are being planned at all levels of the Command. The capstone event will be conducted at Fort Monroe on April 19, 1996. The featured speaker for that event will be General (Retired) William R. Richardson, former Commander of the Training and Doctrine Command. General (Retired) Richardson's participation in this event is particularly appropriate, since it was largely through his efforts that Army ROTC became a Major Subordinate Command of TRADOC.

As a consequence of the extremely successful JROTC Expansion Program, the number of participants in the high school level program reached an all-time high. More than 204,000 students now participate in the program – which exists to help young people to become better citizens.

On the college scene, one of the highlights of the fall semester was the Ranger Challenge competition. Cadets participating in this program must demonstrate their skill in rifle marksmanship, orienteering and patrolling in a head-to-head competition. Other events associated with the competition included construction of a one rope bridge, negotiation of a grenade assault course, the Army Physical Fitness test and completion of a 10 kilometer road march. The top units in each brigade, as a result of this year's competition were:

First Region

First Brigade - Boston University
Second Brigade - University of Pittsburgh
Fourth Brigade - James Madison University
Fifth Brigade - The Citadel
Sixth Brigade - North Georgia College

Second Region

First Brigade -Ohio State University & Capitol University
Second Brigade - Marquette University & Western Michigan University
Third Brigade - Vanderbilt University
Fourth Brigade - Southwest Missouri State University
Fifth Brigade - University of Alabama

Fourth Region

First Brigade - Gonzaga University
Second BrigadeColorado School of Mines and Technology
Third Brigade - Arizona State University & California State University – Fresno
Fourth Brigade - Oklahoma State University
Fifth Brigade - Texas A & M

*** NOTE: Some Brigades conduct two competitions because of the geographic separation of units.

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